

# QUALCOMM WCS Experiment Proposal

## 1 Introduction

Qualcomm Incorporated (NASDAQ:QCOM - News) is the world leader in 3G/4G and next-generation mobile technologies. For 25 years, Qualcomm ideas and inventions have driven the evolution of wireless communications, connecting people more closely to information, entertainment and each other. Today, Qualcomm technologies are powering the convergence of mobile communications and consumer electronics, making wireless devices and services more personal, affordable and accessible to people everywhere. For more information, please visit [www.qualcomm.com](http://www.qualcomm.com).

## 2 Experiment Description

Qualcomm is planning testing of small cell LTE base stations and LTE user equipment (UE) using WCS spectrum at multiple locations in the United States as detailed in the transmitter information section.

Small cell equipment will be installed inside or around test locations within the radius defined in Table 2 and operated 24 hours per day 7 days per week. UE's will be operated within the coverage area. Mobile peer-to-peer LTE testing can occur anywhere within the defined operational radius.

## 3 Transmitter Information

The maximum output power for mobile units and small cell base stations is listed in Table 1. Table 2 lists the operational radius where small cells and mobiles will be deployed and operated.

**Table 1 Transmitter Information**

Device Type	Frequency (MHz)	Power (dBm EIRP)	Power (W EIRP)	Power (W ERP)	Maximum Bandwidth (MHz)	Emissions Designator:
Mobile	2305-2315	27	0.5	0.3	10	10M00W7W (LTE)
Fixed	2350-2360	33	2	1.2	10	10M00W7W (LTE)

**Table 2 Transmitter Site Information**

Area	Operational Center point Lat/Long	Radius of Operation	Base Station EIRP	Mobile EIRP
San Diego, CA	32 53 42 N 117 11 42 W	5 miles (8 km)	2 W EIRP	0.5 mW EIRP
Bridgewater, NJ	40 33 7 N 74 42 56 W	10 miles (16 km)	2 W EIRP	0.5 mW EIRP
Boulder, CO	40 3 58 N 105 12 35 W	10 miles (16 km)	2 W EIRP	0.5 mW EIRP
El Centro, CA	32 46 51.2 N 115 33 4 W	5 miles (8 km)	2 W EIRP	0.5 mW EIRP
Atlanta, GA	33 48 10 N 84 23 7 W	5 miles (8 km)	2 W EIRP	0.5 mW EIRP
San Francisco, CA	37 46 43 N 122 23 59 W	2 miles (3.2 km)	2 W EIRP	0.5 mW EIRP
Silicon Valley	37 26 31 N 122 8 53 W	15 miles (24km)	2 W EIRP	0.5 mW EIRP
New York, NY	40 42 44 N 74 0 22 W	1 mile radius (1.6km)	2 W EIRP	0.5 mW EIRP
New York, NY	40 44 38 N 73 59 17 W	1 mile radius (1.6km)	2 W EIRP	0.5 mW EIRP
Dallas, TX	32 50 7 N 96 50 19 W	5 miles (8 km)	2 W EIRP	0.5 mW EIRP

## 4 Frequency Coordination

Consent of spectrum licensees will be obtained prior to usage.