

# QUALCOMM 3550-3650 GHz MHz Experiment Proposal

## 1 Introduction

Qualcomm Incorporated (NASDAQ:QCOM - News) is the world leader in 3G 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 working with partner companies Verizon and Ericsson to evaluate and trial a supplemental downlink LTE system operating in the frequency range of 3550-3650 MHz.

This trial will consist of up to 10 fixed site base stations and up to 50 small cell sites located inside the geographic region described in Section 2. The fixed sites will use established antenna sites and the small cells will be located at strategic commercial and/or residential locations. All equipment is prototype R&D hardware controlled by Qualcomm or partner companies.

The intent is to operate the LTE downlink 24 hours per day 7 days per week.

## 3 Interference Coordination

Immediate requests for Qualcomm to stop transmission should be emailed to [3.5GHz.trial.shutdown@qualcomm.com](mailto:3.5GHz.trial.shutdown@qualcomm.com). Alternatively, a shutdown requested may be submitted through John Forrester who can be contacted at 858-845-7428 or [jforrest@qti.qualcomm.com](mailto:jforrest@qti.qualcomm.com)

## 4 Transmitter Information

A single downlink RF channel with a maximum transmission bandwidth of 20 MHz will be operated within the requested frequency range at any one time from a fixed site. Mobile units will operate within 5 miles of the fixed site.

The maximum EIRP for fixed sites (small cells) and mobile stations is listed in Table 1. The fixed sites also support MIMO and the defined power is with respect to each antenna element.

Table 2 defines the deployment radiuses where all fixed and small cell sites will be located within during the testing.

**Table 1 Transmitter Information**

Type	Transmit Frequency (MHz)	EIRP (dBm)	EIRP (W)	ERP (dBm)	ERP (W)	Maximum Transmission Bandwidth (MHz)	Emissions Designator
Mobile	3560-3650	30	1	27	0.61	20	20M00W7 W
Fixed	3560-3650	37	5	34.9	3	20	20M00W7 W

**Table 2 Fixed and mobile Transmitter Deployment Radius**

Location Description	Location #	Operational Center Point		Fixed Site Location Radius	
		Lat	Long	Miles	km
Bridgewater 500 Somerset Blvd	1	40° 35' 7.0794"	-74° 37' 27.48"	10	16