

1 Introduction

QUALCOMM is expanding its technology with the emergence of new applications for wireless technology with its MediaFLO technology. The MediaFLO™ System, a comprehensive end-to-end solution, simultaneously and cost-effectively delivers unprecedented volumes of high-quality, streaming or clipped, audio and video multimedia to wireless subscribers.

More information on MediaFLO is available on the QUALCOMM website:
<http://www.qualcomm.com/mediaflo/index.shtml>

The MediaFLO system will initially launch in the United States using spectrum owned by Qualcomm in the 700MHz band. The commercial network consists of high power transmitters deployed to provide coverage to receive-only mobile devices. The mobile devices utilize conventional cellular networks to send any required messaging information to the MediaFLO network.

Qualcomm is now looking at new bands for international network deployments. One frequency range of interest is the 1452-1492 MHz band scheduled for auction in the United Kingdom. This band will not be used in the US for commercial MediaFLO operations.

Qualcomm has an engineering requirement for an over-the-air (OTA) network to support development and demonstration. Although a commercial MediaFLO deployment incorporates transmitter powers levels well in excess of 100W ERP, it is understood that a representative high power test network is not feasible in the United States due to aeronautical operations in the 1452-1492 MHz band. Instead, Qualcomm is proposing to deploy low power, in-building, RF networks at three locations in San Diego to assist with engineering development and demonstration of MediaFLO capable mobile handsets.

2 AFTRCC Coordination

QUALCOMM completed AFTRCC coordination on November 28, 2006. The coordination allows transmission from February 1 through August 1 of 2007. The AFTRCC coordination has been uploaded as a separate attachment.

3 Experiment Description

Qualcomm is requesting usage of three 5.1 MHz channels (15.3 MHz total) in the frequency range of 1452-1479.5 MHz. No guard band is required between channels. Transmitters will be installed inside three Qualcomm buildings with the intention of providing limited in-building coverage using EIRP transmit levels of 500mW or less. Tables 1 and 2 contain descriptions of the buildings and transmitters.

A single transmitter will be located in each of the three proposed buildings. Coaxial cables will route the RF to antennas located within laboratory areas where testing and demonstrations will occur. The transmit antennas types are TBD, but will likely be whip or patch antennas. For this lab coverage RF requirement, EIRP levels of 500mW or less will provide the required radiated test environment. Interference to aeronautical operations will be mitigated by the building attenuation and low EIRP levels.

The transmitter equipment will be prototype equipment and the manufacture is not yet determined. The mobile receivers will be prototype MediaFLO capable cell phones manufactured by Qualcomm.

The desired operated frequency range is 1452-1479.5 MHz, however, the equipment will be capable of tuning anywhere in the frequency range of 1452-1492 MHz if the primary band is not available.

The transmitters are scheduled to be activated in February 2007 after a FCC experimental license is issued.

Table 1 QUALCOMM Building Locations

Location Name	Description	Address	Lat	Long	MSL (ft)
Building AF	2 story 71,242 Sq ft Building	9950 Barnes Canyon Rd San Diego, CA 92121	32°53'58.60"N	117°12'6.23"W	261
Building AM	2 story 71,260 Sq ft Building	9940 Barnes Canyon Rd San Diego, CA 92121	32°53'58.00"N	117°12'9.34"W	260
Building AA	4 story 279,623 Sq ft Building	10290 Campus Point Dr San Diego, CA 92121	32°53'26.44"N	117°13'22.97"W	315

Table 2 Transmitter Information

Parameter	Value
Occupied BW (50% pwr)	4.52 MHz
Emission Bandwidth	5.1 MHz
Emission Designator	5M10W7W
Frequency Request	1454.5, 1459.5, and 1464.5 MHz
Tunable Frequency Range	1452-1492 MHz
Transmitter Conducted Power	0.5W, 27dBm.
Antenna Gain	TBD
MAX Transmitter EIRP	0.5W, 27dBm
Transmitter Locations	3 possible, see Table 1
Transmitter MSL (ft)	See Table 1
Receiver Locations	Mobiles inside buildings described in Table 1
Receiver Antenna Type	Varies with mobile phone design