

To whom it may concern,

This is a narrative statement in regards to FCC STA application 0475-EX-ST-2010. Nancy Hey indicated that the statement should be “an explanation of what technology you are testing and what you plan to achieve through your experiment”, and I hope that those topics are adequately covered in the following document.

My name is Kurtis Heimerl and I am a representative for the Technology and Infrastructure for Emerging Regions (<http://tier.cs.berkeley.edu>) group under Professor Eric Brewer at the Computer Science Department, University of California, Berkeley. We are currently conducting research hoping to create a GSM Base Station optimized for low-density rural areas in Sub-Saharan Africa. To accomplish this, we will be deploying and testing an installation of the OpenBTS (<http://openbts.sourceforge.net/>) project in Berkeley CA. OpenBTS is an open-source GSM base station.

To begin this deployment, we plan to begin by creating a simple GSM base station installation in the UC Berkeley area. We have purchased a USRP1 from Ettus Research (<http://www.ettus.com/>) to produce the GSM signal. We will then use a standard Yagi antenna to direct the signal to cover only Soda Hall, the Computer Science building at UC Berkeley. This is approximately one kilometer from the base station installation at the Berkeley Space Science Laboratory. We plan for the base station to operate in the 900mhz band (European GSM) to avoid interaction with existing cellular infrastructure (850mhz).

The purpose of this installation is to test the baseline hardware, our location, and our GSM handsets. Following this installation, we will be submitting further STAs for particular changes to the hardware and software dealing with optimizing this network for emerging regions.