From: Mark Vickberg

To: Behnam Ghaffari
Date: July 10, 2012

Subject: FCC File No. 0335-EX-PL-2012

Message:

Mayo Clinic Experimental License Application Correspondence Reply

To: Behnam Ghaffari
Federal Communication Commission
Office of Engineering and Technology

Re: Correspondence Reference Numbers 17441 & 17442
FCC Form 442
File # 0335-EX-PL-2012

You asked for clarification and additional information, ?If this is to request to operate under Part 15 power restriction rules, please submit a detailed power calculation as how 0.75 mW (ERP) has been obtained.?

This is a request to operate under Part 15 power restriction rules. As described below, we plan to ensure proper operation by direct calibration. The laboratory in which the on-body transmitter hardware and gateway is being designed and assembled contains a large suite of RF test equipment including items such as spectrum analyzers, network analyzers, power meters etc. and a fully anechoic antenna test chamber. These instruments are calibrated on an annual basis to NIST traceable standards.

The on-body experimental transmitter circuit includes RF test points at the transmitter integrated circuit output and antenna matching circuit output. This allows direct power measurements to be made using a laboratory grade power meter and spectrum analyzer with coaxial probes. The transmitter circuit is adjustable in 0.65 dB increments allowing the final power to be precisely set.

The gateway also includes the programmable power feature and can be connected directly by coax for final circuit characterization. After characterization of circuit losses and antenna performance to determine the appropriate power level setting, final ERP values for each of these devices will be verified by direct measurement in the anechoic chamber.

Sincerely,
Mark Vickberg
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