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Dear J. Kennedy,

Thank you for giving us an opportunity to explain our tests in greater detail. If there are any other questions please call or write.

Why STA is Necessary:

Euclid Concepts, LLC requests a grant of Special Temporary Authority ("STA") to operate an experimental radio station. The STA is necessitated by Euclid Concepts' need to test experimental wireless equipment to obtain a proof of performance of interoperability and data transmission between an on campus IT system and physically separated buildings on the campus of Denison University.

Denison University is one of 17 Ohio Universities taking part in the Third Frontier Network which is a dedicated high-speed fiber-optic network linking Ohio colleges and universities with research facilities to promote research and economic development. Over 1,600 miles of fiber have been purchased to create the network backbone to connect colleges and universities, K-12 schools, and communities together. Once the main fiber is connected to each university's main IT system, the many buildings on and off campus must be connected so they are able to use this resource through wire lines, fiber optic cable, or wireless radio frequency media.

Our wireless experimental unit uses a unique transceiver design that allows it to be transparent to any digital data format and works at wireless millimeter wave frequencies. For this test we have selected the 92-94 GHz and 94.1-95 GHz band. To verify correct operation in the campus environment we will need to be approved for an STA which will allow us to conduct on the air testing of the suitability of this unit for future production for the US market. The inventor Dr. Daniel Korneev has obtained a visa to personally supervise the first installation and tests hopefully beginning on June 14, 2004. We believe that a temporary authorization is appropriate because the experiments will run for a period of three months.

There is no commercial arrangement between Denison University and Euclid Concepts, LLC. We are providing the equipment and expertise to run the tests out of our pocket in the hopes of validating our concepts and design. Under the next section "Purpose of Operation" we have listed a description of our experimental efforts for your approval.

Purpose of Operation

The basic goal of our experiments will be to evaluate the performance of our unique transceiver design and test the viability of using the higher millimeter wave frequencies for very high data rate point-to-point communications connectivity in a real world campus atmosphere. The units will be set up at various locations on the campus with direct connection to the IT network as well as standard link measurement test equipment. They will be operated in an outdoor environment and due to propagation effects at the higher frequencies we have minimal expectations of interference issues arising from our testing. Our test plan includes the following list of items:

1. Propagation tests within this band to test the viability of using this frequency range.
2. Modulation and demodulation concept verification.
3. Effects of multipath induced errors.
4. Degradation due to excess path loss caused by atmospheric attenuation.
5. Data rate and format transparency.
6. Verification of climatic effects on propagation.
7. Establish installation process and procedure for transceivers.

This experiment will attempt to verify and confirm laboratory tests and calculations in real world environments. The basis of this effort is to confirm, validate, and demonstrate both our unique design and the technical advantages of using the upper millimeter wave bands to accomplish our tests. Procurement policy at Denison insists in a real world installation and test of our equipment before engaging our company to build a production version of our prototypes for sale to them.

We hope that you will approve our application for an STA to begin June 14 and run for a period of 3 months until September 14, 2004 to help us in meeting our goals.

Respectfully submitted,

Euclid Concepts, LLC

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