

Advanced Tel., Inc.  
FCC Form 442  
Exhibit 1

Response to Item 4

Applicant seeks to modify Experimental Station KM2XGL by replacing the transmitting antenna and increasing the power of the station from 1 watt to 100 watts ERP in the 1,850-1,990 MHz frequency band. Equipment utilized in this band will operate at or below 100 watts ERP.

Radio frequency emissions produced by equipment operating in the bands stated in Item 4(a) will vary with the specifications of the particular equipment utilized. The equipment proposed for use will employ amplitude, frequency or phase modulation of digital telephony. The basic technical parameters to be used are as follows:

Channel bandwidth: 100 kHz  
Transmitted bit rate: 72 kb/s  
Speech coding type: Adaptive Differential PCM (ADPC)  
Modulation: Binary FSK and Gaussian MSK

The proposed research will involve digital modulation in the analysis of reflective and absorptive losses in different environments. The necessary bandwidth will vary with the manufacturer's equipment, but the maximum bandwidth will be necessary for propagation research and applications of wideband modulation techniques, such as Direct Sequence Spread Spectrum.

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Exhibit 2

Response to Item 5

Applicant estimates that with respect to its proposed modification to increase the power on Station KM2XGL to 100 watts ERP in the 1,850-1,990 MHz frequency band, it will utilize a minimum of one (1) base station and twenty (20) handsets. Applicant proposes to conduct its experiment in the referenced frequency band in and around buildings which house the engineering and business departments of Louisiana State University. The exact location of the base station to be utilized during the experiment has not yet been determined.

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Exhibit 3

Response to Item 10

Applicant seeks to modify Experimental Station KM2XGL by replacing the transmitting antenna and increasing the power of the station from 1 watt to 100 watts ERP in the 1,850-1,990 MHz frequency band. Equipment utilized in this band will operate at or below 100 watts ERP.

Applicant proposes to conduct performance tests in the referenced frequency range on the campus of Louisiana State University. Equipment utilized will directly interface with digital telephone switching and service control equipment. Applicant will test various coverage thresholds under a variety of conditions in a university campus environment. The performance of the equipment and system will be recorded with respect to capacity to handle traffic, transmission quality, idle channel noise, the effect of various weather conditions and the type/quality of microcell transport facility and PCS vendor equipment. Applicant will not operate its experiment in a manner that would cause harmful interference to existing users of spectrum.

Applicant will hold discussions with potential subscribers of handheld personal communications service ("PCS") devices to identify the applications most relevant to PCS in a university campus environment. Applicant believes that its proposed research will be beneficial for development of PCS systems throughout the United States. The proposed PCS experiment will provide valuable information regarding user demand, system design and user constraints in a university campus environment.

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Exhibit 4

Response to Item 13

Applicant is reviewing two vendors' proposals to provide base station and portable unit equipment to be utilized in the proposed experiment. Once Applicant chooses the actual equipment to be used, the Commission will be notified. Applicant anticipates using a minimum of one (1) base station and twenty (20) handsets.