

August 8, 2007

The University of North Carolina requests licensing under Part 5 Subpart H (Student Authorizations) for the purpose of teaching students about radio frequency techniques. Operation in the frequency ranges of 27.23-27.28, 460-461, 462.525-467.475, and 2450-2500 MHZ will allow discussion of techniques appropriate for HF, UHF, and lower microwave frequencies, and can be done by reprogramming commercially-available equipment (modified ICOM IC-706 MkIIG with temperature-compensated reference oscillator). The above range of frequencies is large enough for us to avoid interference to other services (such as CB, FRS, GMRS, or Land Mobile) by monitoring frequencies before transmitting and by operating for short periods.

The University of North Carolina is a degree-granting public university of the State of North Carolina. The applicant is a citizen of the United States of America and is a Professor and Director of the Renaissance Computing Institute, an institute with a responsibility to educate not only UNC students but also K-12 students in the state. The ability to operate low power (under 4 watt) RF equipment in a mobile manner will make it possible to take equipment into these middle- and high school situations for demonstrations of the physical and engineering principles involved.

Frequency measurement and adjustment as well as bandwidth determination will be done by both faculty and students using our existing Tektronix RSA3408A Spectrum Analyzer.

Antennas will be quarter-wave vertical monopoles used at desktop level on frequencies below 2450 MHZ and will be an assortment of unity-gain, feedhorn, and small parabolic dish antennas at desktop level for 2450-2500 Mhz.

Please direct inquiries to

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Thank you very much for your consideration of this request,

Dr. Daniel A. Reed  
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