

Exhibit 1

This application requests experimental authority under Part 5 of the Commission's Rules to conduct testing of new location and monitoring technology ("LMS") being developed by Matrics, Inc., for use in an industrial setting. The experiment will evaluate the design of antennas, tags, and tag readers to be used in determining the precise location of fork-lift style trucks designed with front-end clamp loaders used in the loading of large rolls of paper. The LMS reader antennas will be mounted on the front of the clamp trucks within the jaws of the clamp and will be used to read tags using modulated backscatter. The reader antenna is highly directional and will be used only when the truck has been positioned in front of a large roll of paper. The bulk of the radiated energy will be absorbed by the roll of paper in this application. Another application will involve use of the technology to locate the roll as it moves through the facility on a large conveyor.

The following information is provided in support of this request:

1. **Applicant:**

Matrics, Inc.
8850 Stanford Blvd.
Suite 3000
Columbia, MD 21045
410-872-0300
443-782-0230 (fax)

Contact: Kevin J. Powell, Senior Director, Product Development

2. **Dates of operation:** October 15, 2003 – October 15, 2005 (or earlier if the experimentation is concluded before this date)

3. **Place of operations:**

International Paper
Texarkana Mill
Highway 59 South
FM Road 3129
Domino, TX 75572

Operating Area:

Mobile within a 1 km radius of 33-15-10 N. Lat.
94-04-15 W. Long.
1927 datum

4. **Number of units:** up to 5 active clamp trucks and up to 5 reader stations along conveyors
5. **Width of beam in degrees at half-power point:**
83.6 degrees in the horizontal plane; 98.2 degrees in the vertical plane
6. **Orientation in horizontal plane:** 0.0 degrees
7. **Orientation in vertical plane:** 90.0 degrees
8. **Transmitter output power:** 20 Watts, peak
9. **Effective radiated power:** 30 Watts max
10. **Frequency:** 911.8 MHz
11. **Frequency tolerance:** 2.5 PPM
12. **Emission designator:** 253KF1D
13. **RF exposure information:**

The 30 watts maximum effective radiated power requested is below the 100 watts limit for the exclusion from routine environmental evaluation for experimental applications. Experimentation to date has allowed for the development of equipment that operates at no more than 30 watts ERP. Continued experimental operation can be conducted at this level. Note that in actual operation, the ERP radiated into free space for those transmitters operated on clamp trucks is expected to be far less than one watt as most of the power is dissipated into large rolls of paper that are being transported.

As noted above, this application is to secure authority to evaluate equipment under development for operation in the non-multilateration Location and Monitoring Service. The equipment to be operated will be installed on large "clamp truck loaders" capable of picking up rolls of paper that weigh up to five tons. These loaders use the truck body of large fork-lift vehicles that have been equipped with giant clamps in place of the traditional fork prongs. Patch antennas will be placed on the ends of the clamp arms and in the apex of the clamp. These antennas are designed to work most efficiently when radiated into a dielectric consisting of paper rather than air. Thus, the system is designed so that the bulk of its radiated energy will be absorbed by the roll of paper. Accordingly, each antenna will direct its radiation into the roll of paper as the goal of the operation is to determine the precise location of the clamp truck loader with respect to a particular roll of paper. A tag will be within the center of the roll of paper. If a roll of paper is not within the jaws of the clamp, the transmitter will power down by several dB in order to avoid creating a high SWR condition. Moreover, the placement of the antennas on the clamp affixed to the front end of the clamp truck loader will ensure that personnel are

kept at least two meters from the radiating element of the antenna as it would be potentially hazardous for personnel to be close to the roll of paper while it is held by the jaws of the clamp. Note, too, that the calculated power radiated into free space even when the system is radiating a maximum of 30 watts ERP into the paper roll will be less than 10 milliwatts because of the absorption of the RF energy by the paper roll.

Additional experimental operation will involve locating large rolls of paper as the rolls are transported throughout the paper mill complex using massive conveyors. This application will function with a maximum ERP of 30 watts. Trained personnel will be at least 50 cm from the antennas in this application and others will be kept at least one meter away from the antennas in this application in both the conveyor and the clamp truck applications. At these distances, the devices under evaluation will comply with the FCC's limits on RF exposure for occupational/controlled and general population/uncontrolled exposure, respectively.