

Group No: 06  
Date: 11/12/01  
Report No: 04  
Project Title: Wireless Cargo Container Tracking System

Group Leader: Andrew Nikow  
Advisor: Yu Dong Yao  
Sponsor/Client: Interpool

Project on Schedule: YES  
Hours Spent Last Week: 40

#### Weekly Status:

With the exception of some alterations to the business model and some refinement in the cost and profit estimates the group has completed course requirements for E421.

A meeting with Dr. Yao took place Tuesday, November 6. At this meeting the group provided various system models including abstracted architectures of each entity involved (smart card reader, PDA, etc.) in order to set the groundwork to begin building an early stage demo. The group also provided revised bluetooth and RF information to further determine a final technology for use in our wireless system. There are three classes of bluetooth technology; 1, 2, and 3. Class 3 technology operates in the license free 2.4 GHz ISM spectrum which is good but has slow connection speed characteristics and a slow data rate. The group is looking into combining technologies from multiple classes to take the best properties from each class.

The group researched a basic RF2510 VHF/UHF transmitter as an alternative to bluetooth. The RF2510 can function as a wireless data transmitter and as a low cost single frequency LO source. It functions in the 300 to 1000 MHz range and has low power and resource characteristics which is good for us because powering our system will be a challenge. The group still believes that bluetooth is the best technology for our application.

For the next meeting with Dr. Yao the group has four major objectives. The group will find the best combination of bluetooth class 1, 2, and 3 technologies to provide product availability, price, and connection speed characteristics, investigate further the RF 2510 product, refine the system architecture models to include global characteristics in 3 drawings, and further discuss alternative technologies.

Finally, a meeting with Dr. Keating and Interpool Group II is being scheduled for this week.

