Best Five Projects 2012-13

1. Project Title: Smart Barcode system for Cattle Monitoring

Abstract: At present Solapur district is declared as drought area and hence many cattle camps are held in Solapur district. Hence it is huge opportunity to create the database of the cattle in and around Solapur. The innovative use of barcode system is made to create the database of the cattle joining this camp at Ankoli. So necessary barcode system is developed which comprises the transmitting and receiving system. Using the latest technology Zigbee, it will be total transparent administration monitored from single point.

Domain/Area of the project: Communication Engineering

Sponsored By: I2SATCOM- Solapur Green, Solapur

2. Project Title: Fake Currency Recognition Using Image Processing

Abstract: Automated paper currency recognition system can be a very good utility in banking systems and other field of commerce. Since many years counterfeiting of paper currency challenges the financial system of every country in different sectors, India is also one of them. Seven characteristics of paper currencies are considered here including currency serial number, currency number size, latent image, watermark embedded number, silver bromide strip, red number intensity and overall contrast of note. The characteristics extraction is performed on the image of the currency and it is compared with the characteristics of the genuine currency. The captured image is first pre-processed by reducing data dimensionalities and extracting its features by using image processing toolbox in MATLAB. The proposed method has advantages of simplicity and high speed.

Domain/Area of the project: Image Processing

3. Project Title: Direct Recording Electronic Voting Machine

Abstract: The objective of the project is to develop a microcontroller based security and alert system. It consists of a fingerprint reader, Microcontroller & GSM Modem along with the interfacing unit to allow the communication between the microcontroller and different modules and the LCD. The Project Demands the user to submit his Finger print at the polling booth before voter votes.

Domain/Area of the project: Embedded System

Sponsored By: Udit Narayan Food & Agrotech (P) Ltd.

4. **Project Title:** Portable Biometric Embedded Device for Attendance Management and Parent Alert System.

Abstract: The portable wireless fingerprint attendance system based on Biometric & GSM Technology is designed. The system includes terminal fingerprint acquisition module and attendance management module in computer. It can realize automatically such functions as information acquisition of fingerprint, processing, wireless transmission, and fingerprint matching and attendance management. Biometric time attendance is very user friendly and easy to use; any person can use it very easily. It is very fast also, user has to see once in front of system and all details including its time will be recorded automatically. In this way it saves lot of time and record details very accurately

Domain/Area of the project: Embedded System.

5. **Project title:** GPS Based Vehicle Tracking System

Abstract: The ability to track vehicles is useful in many applications including security of personal vehicles, public transportation systems, school buses and others. Therefore, the development of vehicle tracking system using the Global Positioning System (GPS) and Zigbee module is with the aim of enabling users to locate their vehicles with ease and in a useful manner. The system will provide users with the capability to track vehicle remotely through the mobile network. This system is based on 8051 micro controller, zigbee and GPS. GPS technology is used to track location of the vehicle. This information contains exact location of the vehicle. 8051 micro controller collects the information and sends to the Monitoring system using GSM modem. The Monitoring system uses GUI LCD to display the received information on Google Map.

Domain/Area of the project: Microcontroller.