

# Design and Development of Wireless Sensor Node for Anti-Poaching

## Abstract:

*Smuggling/Theft* of Trees has led to an increase risk of Natural Resource getting extinguished. Animals are losing their Natural Habitat, thus causing a total imbalance in Nature. The theft of trees causes a huge economic loss to people who grow trees for a livelihood. This paper proposes a microcontroller based anti-poaching system employing a WSN protocol, which is capable of detecting theft by monitoring vibrations produced while cutting trees using a MEMS accelerometer. A low power msp430f5528 microcontroller is used along with 2.4 GHz CC2500 trans-receiver to communicate to a central Base Station from a unknown location where activity is detected. WSN is widely used technology for monitoring application to reduce the limitation of transmitting capacity of a Communication module and also to reduce battery consumption of device to extend Battery life. The embedded system architecture and the hardware/software designs are described in detail.