

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A Project Report on

**“RSS-BASED LOCATION ESTIMATION IN MOBILITY ASSISTED
WIRELESS SENSOR NETWORK”**

Submitted in partial fulfillment of the requirements for the award of degree of

**BACHELOR OF ENGINEERING
IN
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CHAPTER 1

INTRODUCTION

1.1 Wireless Sensor Network

Wireless sensor network consists of number sensor nodes for sensing the environment. These sensor nodes are responsible for converting the physical phenomenon such as heat, light, sound and motion into electrical or other signal that may be further manipulated by other apparatus [11]. These sensor nodes can be deployed randomly or structurally based on the requirement. Each sensor nodes have the separate storage, communication and processing unit. These sensor networks are not only communication with each other, but also with the Base station using their wireless radios, allowing them to disseminate the sensed data to remote processing, visualization, analysis and storage systems [12]. The process that'll happen in wireless sensor network is that, each deployed sensor nodes senses the environment within its range and collect the information and transmit the information to base station.

The sensing capabilities of sensor nodes may vary because, a simple sensor can perform a single simple task whereas complex sensor network may perform number of tasks. Sensor nodes can be deployed either randomly or structurally. In structured deployment sensor nodes are deployed in prioritized manner at a location of operational area where sensor measurements are needed whereas in random deployment there are no rules for placing the nodes. Sensor node can use any type of network topology such as single hop, multi hop mesh or hierarchical clustered to allow the transmission of sensed data to data fusion node and then to base station [2]. These types of topology also may be under the impact of several security aspects.

The sensor network face many challenges, since each sensor node is equipped with the battery, it has to work for longer time otherwise it may lead to inefficiency in the network [12]. And also it required that sensor nodes should