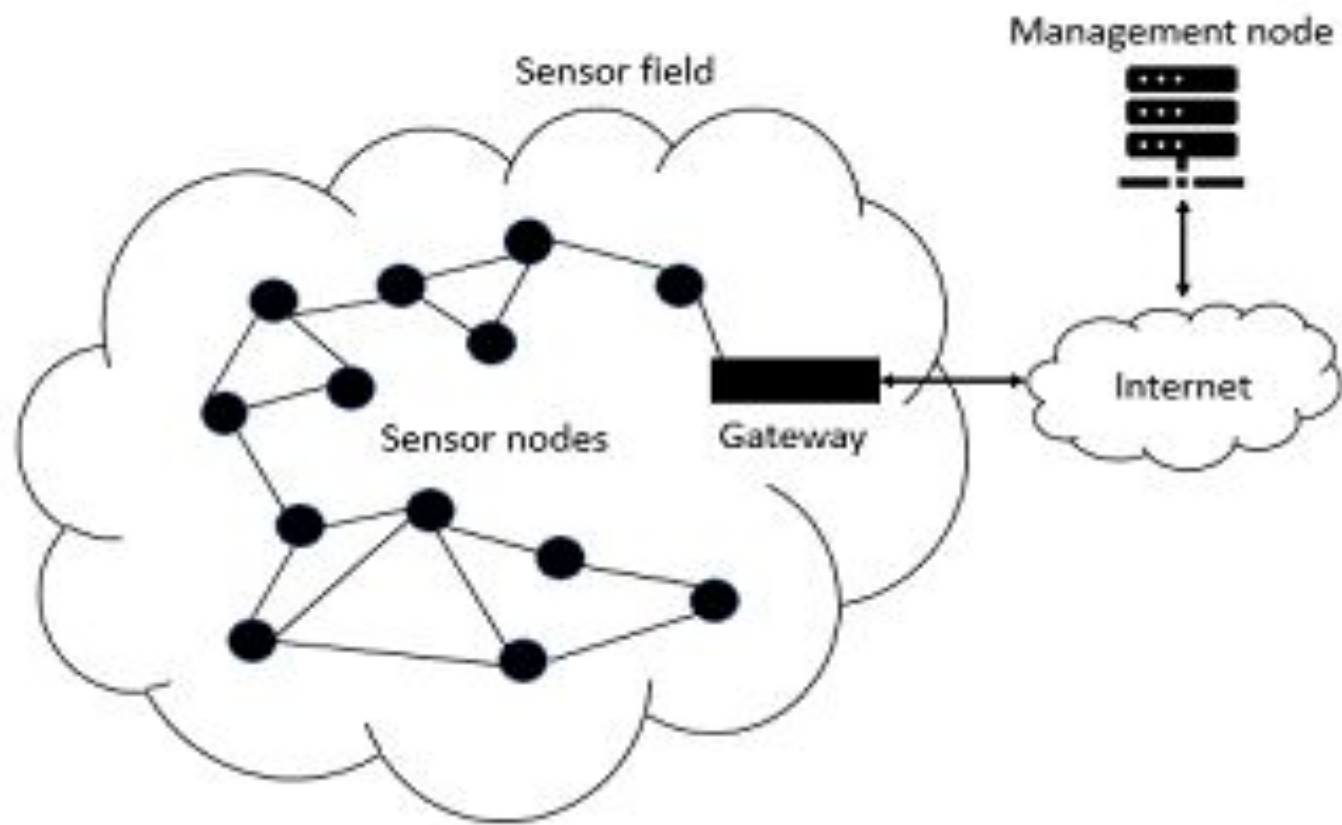# Introduction To Wireless Sensor Networks

Elementrix Classes

INTRODUCTION

Sensing is a skill used to assemble information about a physical object or process, including the occurrence of events (i.e., changes in state such as a drop in temperature or pressure). Sensor is an object performing such a task of sensing. For example, the human body is covered with sensors that can capture optical information from the surroundings (eyes), acoustic information such as sounds (ears), and aroma related information such as smells (nose). These are examples of remote sensors, that is, they do not need to touch the object to be monitored to gather information. Briefly defining, a sensor is a device that converts parameters or events in the physical world into signals that can be measured and analyzed. Recent advances in microelectro-mechanical systems(MEMS) technology and use of low power embedded computing devices made it feasible to develop sensors.

Sensor field

Management node

Sensor nodes

Gateway

Internet

Sensor Network Components

- ➢ **Sensor -** A transducer which converts physical phenomenon e.g. heat, light, motion, vibration, and sound into electrical signals.
- ➢ **Sensor Node -** basic unit in sensor network contains on-board sensors, processor, memory, transceiver, and power supply.
- ➢ **Sensor Network -** consists of a large number of sensor nodes.
- ➢ **Gateway Node -** A Gateway is a device or software that acts as a bridge between the sensor nodes and a network or the internet. It is responsible for collecting data from the sensor nodes, processing it, and forwarding it to the appropriate destination.
- ➢ **Management Node -** Management Node is a device or software that performs a variety of management tasks, such as network configuration, monitoring, and control.

पढ़िए और पढ़ाइये

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