**Abstract**

A wireless sensor network consists of spatially distributed autonomous sensors to monitor physical or environmental conditions, such as temperature, sound, pressure, etc. and to cooperatively pass their data through the network to a main location. In the wireless sensor networks, routing protocols and data aggregation schemes are used to reduce the large amount of transmissions. In the wireless sensor network, security is an important concern. However, the characteristics of wireless sensor networks require more effective methods for data forwarding and processing. In WSN, the sensor nodes have a limited transmission range, and their processing and storage capabilities as well as their energy resources are also limited. Routing protocols for wireless sensor networks are responsible for maintaining the routes in the network and have to ensure reliable multi-hop communication under these conditions. In this paper, we give a survey of routing protocols for Wireless Sensor Network and compare their strengths and limitations.