Cluster based Routing Schemes in Wireless Sensor Networks: A Comparative Study

Abstract

Recent improvements in the field of micro-electro-mechanical system, digital electronics and wireless communication technology are responsible for the development in applications of wireless sensor networks. Wireless sensor networks (WSNs) are consisting of large number of cheap and tiny devices known as sensor nodes. In WSNs, sensor nodes communicate to each other via the many communication approaches and these routing approaches are governed by routing protocols. These routing protocols are reliable for performance of wireless sensor networks. On the basis of these, this paper contains the survey on wireless sensor networks. Based on the network architecture, routing protocols in wireless sensor networks are categorized into three main types: data centric, cluster based or hierarchical routing and location based routing. Because of certain advantages clustering is becoming as an active root in routing technology. This paper cover the survey on cluster based routing in wireless sensor networks, summarize the merits and limitation of clustering protocols in wireless sensor networks, and suggest a classification of cluster based routing method. Finally conclude the paper.


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**Index Terms**

Computer Science  
Wireless

**Keywords**

Clustering; Routing protocols; Wireless sensor networks; Cluster-based Routing, WSNs.