Abstract

Wireless sensor networks are a type of ad-hoc networks, in which the nodes are basically sensors with data sensing and communication capability. These sensors are limited powered, work autonomously and don’t need any supervision when deployed. Hence the lifetime of the network is a very important design factor. Clustering is one of the key energy efficient techniques used to extend the lifetime of a sensor network by reducing the energy consumption of the sensor nodes. In this paper heterogeneous wireless sensor networks are considered, as
some nodes may be of different energy to prolong the lifetime of a wireless sensor network and its reliability. There are two important factors to be considered in a heterogeneous wireless sensor networks, Stability refers to time at which first sensor node dies in the network. Energy efficiency refers to time till the last node dies in the network. HEEPSCC considers both these factors to design a hybrid protocol for heterogeneous wireless sensor networks. HEEPSCC makes use of concentric clustering scheme based on the advanced node to create clusters and the clusters heads are selected appropriately using k-theorem algorithm.

References

- Li Qing, Qingxin Zhu and Mingwen Wang, "Design of a distributed energy-efficient clustering algorithm for heterogeneous wireless sensor networks", Computer
Communications, Volume 29, Issue 12, August 2006, 2230-2237.


**Index Terms**

Computer Science

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**Keywords**

Advanced nodes  Combined rating  Concentric clustering  Energy efficiency  Heterogeneous wireless sensor network