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Authors:

Monica R Mundada

T Bhuvaneswari

V Cyril Raj

Pallavi B. Kamble

Shubhra Kejriwal

Yashaswini Nag M N

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Abstract

Wireless sensor networks (WSN) are sophisticated systems that are used to gather data from an unreachable and remote environment. WSN consists of base station and hundred to thousands of sensor nodes. The main design issues in WSN include efficient energy management and network lifetime. Most of the approaches assume the nodes to be homogenous, however they can be heterogeneous. In this paper we take a realistic approach by considering heterogeneous networks. The clustering mechanism, location of base station

and the routing process are crucial to elongate the lifetime of the sensor nodes. The clusters will be formed in different topologies depending on the sensor node deployment. The mobile base station, concept of budget to the sensor nodes and multi hop routing in a sensor network with heterogeneous nodes is used to make the network energy efficient and maximize the network lifetime.

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Index Terms

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Keywords

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