



**RESEARCH ARTICLE**

# **Prolonged Network Lifetime and Data Wholeness by Clusters Using B-Ct Algorithm**

*P.Thiyagarajan<sup>1</sup>, O.K.Gowrishankar<sup>2</sup>, K.Sudhakar<sup>3</sup>*

<sup>1</sup>Department of Information Technology & Sengunthar College of Engineering, India

<sup>2</sup>Department of Computer Science and Engineering & Sengunthar College of Engineering, India

<sup>3</sup>Department of Computer Science and Engineering & Sengunthar College of Engineering, India

<sup>1</sup> [rs.cse13@gmail.com](mailto:rs.cse13@gmail.com); <sup>2</sup> [okgowrishankar@gmail.com](mailto:okgowrishankar@gmail.com); <sup>3</sup> [ksudhakar.cs@gmail.com](mailto:ksudhakar.cs@gmail.com);

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***Abstract— The unique characteristics of cost and rapid deployment of sensor networks feigns exciting applications in the areas of communication and in industrial automation, which makes the wireless sensor networks as an integral part of our lives. The key challenge in the design of WSN is being the power consumption of the entire network thereby prolonging the network lifetime. This is possibly being achieved with the help of introducing the cluster head in the multicast routing communication. The existing methods lacks in minimizing the power consumption of data transmission from source to destination due to network overhead. Thus, the cluster head is built to overcome the deficiencies of existing works. The basic concept of cluster head is to perform filtering of raw data collected from its clusters and transmitting the filtered packets to the destination. This paper deals in performing the clustering in two different topologies which abruptly reduces the network overhead and achieves in the reduction of total power consumption of WSN. Further, the implemented algorithm is validated through simulations and has proven its mere performance and scalability.***

***Key Terms: - Mobile sinks, wireless sensor networks, information retrieval, clustering, sensor islands, rendezvous nodes.***

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