Hierarchical Clustering in Decentralized Lifetime Maximizing Tree for Data Delivery in Wireless Sensor Networks

Abstract

A wireless sensor network (WSNs) is a self configuring network which is an anthology of thousands of sensors having insufficient storage, battery life and computation capabilities that communicate via wireless fashion. Wireless sensor network have diverse application domain which includes habitat monitoring, surveillance etc. For data aggregation at single source antecedent to transmitting to ay distant user, decentralized maximizing tree is created that preserves energy and maximizes lifetime of event sources. In this paper we propose a decentralized lifetime maximizing tree along with hierarchical clustering that will minimize the energy consumption, delay during data collection and reduce time complexity.

References

- "An Energy Efficient Hierarchical Clustering Algorithm for Wireless Sensor Networks" By Seema Bandyopadhyay and Edward J. Coyle School of Electrical and Computer Engineering Purdue University West Lafayette, IN, USA.
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"An Efficient Data Aggregation Scheme Using Degree Of Dependence on Clusters in WSNs" by Tetsushi Fukabori Hidehisa Nakayama, Hiroki Nishiyama, Nirwan Ansari, and Nei Kato Graduate School of Information Sciences, Tohoku University, Sendai, Japan Tohoku Institute of Technology, Sendai, Japan Advanced Networking Lab ECE Department, New Jersey Institute of Technology, Newark, NJ, USA.

"Decentralized Lifetime Maximizing Tree with Clustering for data delivery in Wireless Sensor Networks" by Deepali Virmani, Satbir Jain, Department of CSE, BPIT, GGSIPU, Delhi, Department of CSE, NSIT, DU, delhi.


"Attribute aware data aggregation using dynamic routing in WSN" by Jiao Zhang, Fengyuan Ren, Tao He, Chuang Lin 2010 IEEE.

"Energy efficient wake up scheduling for data collection and Aggregation" by Yanwei Wu, Member, IEEE, Xiang-Yang Li, Senior Member, IEEE, YunHao Liu, Senior Member, IEEE, and Wei Lou.

Index Terms

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Keywords

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