

Study of different WSN techniques and protocols : A Survey

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Abstract: Reliable data communication between the sender nodes to the destination node is a big challenge in wireless sensor networks. To improve the performance of the network and lifespan of the network different protocols and techniques are designed by different researchers. Techniques like sectoring, clustering, dissemination are used for achieving various parameters of WSNs. Two types of protocols are designed by researchers for reliable communication in WSN. Delay, energy, loss of packets, the collision between packets is some major problems of the communication system. It will be affected by the behavior of the transmission of sensor networks. This paper helps to authors and researchers to study basic algorithms and protocols of wireless sensor networks.

Keywords: Wireless sensor networks. Delay. Dissemination, clustering, sector.

Introduction :-

Routing and MAC protocols play very important roles in wireless sensor networks. Packet delivery from one node to another node without loss of data is a big challenge in real-time applications of wireless sensor networks. Channel busy during data dissemination, congestion in the network, higher utilization of energy by the sensor nodes during data transmission are the big problems in wireless sensor networks. So to solve these types of problems in networks different routing, clustering, and sectoring approach designed by developers. For better communication between the source and sink node, the structure of the network plays an important role. Different topologies like a chain, hybrid, and hierarchical topologies are used for application deployment in wireless sensor networks. Routing protocols helps to find out neighbor nodes or intermediate nodes for data transmission to the sink node. The utilization of bandwidth for collision-free data transmission is essential for achieving fairness in sensor networks.

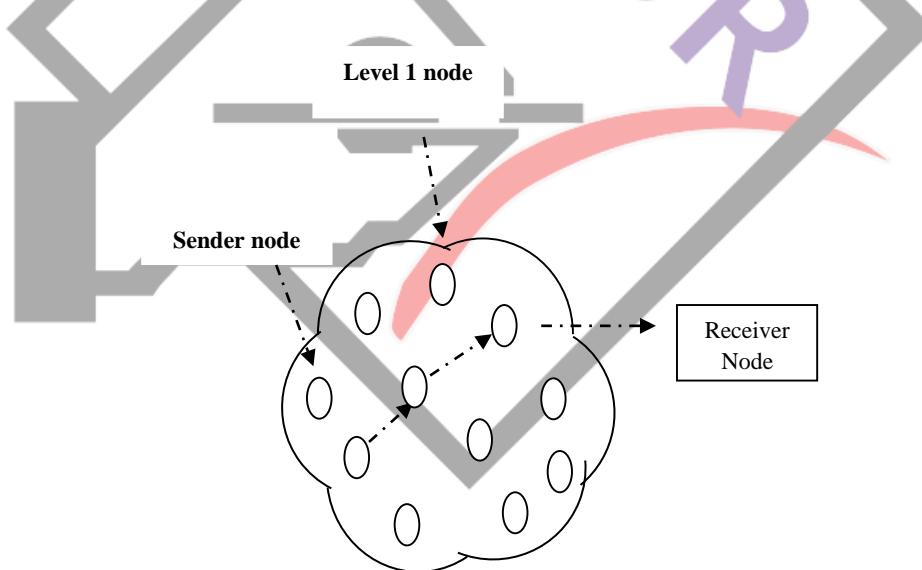


Figure 1. Flow structure of Wireless sensor networks

Data flow and structure of wireless sensor networks is shown in figure 1. The source node, sink node, intermediate node, level 1 nodes are shown in the above figure. This plays a very important role in wireless sensor networks. The sink node works as a receiver node which is used for data collection from all source nodes presents in the networks. Level 1 nodes are work as one hop node from the destination and these nodes are able to transmit packets to the sink. Connection or link failure between sink and source directly effects on the performance of the networks and it stops the communication between the sender and the sink node.

Literature Survey:-

Various Static and dynamic routing techniques designed for accomplish energy potency. Some authors square measure fictitious algorithms for improve energy potency exploitation hop by hop communication. however during this paper author planned New Energy economical Multi-Hop Routing Techniques for Wireless sensing element Networks: Static and Dynamic Techniques.

associate degree author aims to separate sensing element network in several levels. Thus, terribly node are acting consequently on its position and standing. exploitation Static and dynamic techniques, authors improves the time period of the network further as increase network outturn of the network. agglomeration technique is fictitious for reliable information dissemination and reduces energy consumption by the sensing element nodes. [1]

An economical Platform for Low-Power, High-Definition transmission Wireless sensing element Nodes. The paper presents associate degree ad-hoc hardware style that integrates a CMOS camera during a transmission Wireless sensing element Node for sensible farming. All devices have shown effectiveness and responsibility for what considerations energy potency, radio propagation and image quality. The paper presents associate degree improved HW style for a transmission metal put in in agricultural environments. especially, we've accomplished associate degree ad-hoc camera interfacing system so as to urge full management of camera operations, therefore increasing system flexibility and responsibility. associate degree Adhoc PCB style has helped to scale back metal dimensions. within the next future, we are going to investigate new camera interface solutions towards associate degree improved energy saving. Moreover, we have a tendency to square measure attending to integrate camera with higher resolutions (e.g. 5 MP), which permit additional elaborated plant inspections.[2]

Clustering could be a set of sensing element nodes centrally connected to the cluster head. Authors planned some advanced agglomeration techniques like agglomeration head choice exploitation formal logic technique. Effective sleep – active technique cycle for common sensing element nodes, technique like hierarchal agglomeration technique for economical information assortment. Effective strategies for cut back energy consumption. Authors compare the results of planned system with LEACH protocol for energy potency. The planned trendy agglomeration approaches exhibit higher time period compared to the chosen benchmarked protocols. [3]

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