

A Review: Uniform Deployment And Density Based Clustering Protocol In Wireless Sensor Network

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Abstract- *Wireless sensor networks are a new technology that the possible application in the health care sector. In the wireless sensor network energy efficiency is an important topic in a large room and monitoring, environmental and structural monitoring [1]. The life time of the system of the wireless network to extend depends totally on the node from the energy, memory, distance limiting and the energy efficiency by saving battery power. So many different protocols are used for energy consumption in the system of the wireless network. Liquor is a basis for all algorithms, because it is well known fact that different field of work in the system of the wireless network we use several types of designs for data transmission such as the group header (CH), chain formation[2]. This paper presented a new zone-based energy saving algorithm hierarchical grouping together for the load in the system of the wireless network (UDDCH) balanced. In this algorithm can be a network in various same zones by using less energy is used to make the life time of the network to be extended.*

Keywords- Wireless Sensor Network, Zone Based, Chain Formation, Energy Efficiency, Clustering.

I. INTRODUCTION

Wireless sensor network there are hundreds or thousands of nodes that collect information and hop a multiple connection point to the base station, the node can send after using it at the place or to another network. In the systems of the wireless network, the wireless nodes, the irreplaceable drain your battery power out, energy source of sensor networks wise attained to the life time of the sensors to be extended. Energy is a significant expression in the systems of the wireless network, because the aliveness of the wireless sensor node[1]. To energy consumption and reduce the network to maximize life time is an important goal of systems of the wireless network. Protocols so, be one of the core technologies in the systems of a wireless network. The group is for analysis data widely available and it is useful for certain applications, the to the hundreds or thousands of nodes require[3]. Wireless data transfer is the most crucial question among the sources of energy consumption in a sensor nodes. The performance of systems of the wireless network depends

on the amount of data to be transmitted from and the distance between the node to the base station and the performance of grouping together is depends on the selection of the group heads that are responsible for the manufacture of groups and the control of member node. Many break end protocol in wireless sensor network. Liquor is the basis of all of the algorithms. It is the hierarchical routing algorithm that is based on the group. Each node as the possibility to obtain a group head in round each forward. It contains two phases in each round: group you are setup phase and stable data transfer phase. In the sensor network is algorithm used to groups[4][6]. This is the energy consumption of each part of the network is balanced debt to parts of the communication load. This protocol is that when nodes be preselected as group heads and non- group head then the energy consumption of all nodes are equal. All non-group head sends your data to the closest group head. Then send group heads accumulated data for data sink directly. T (n) is determined according to the equation:

$$T_1(n) = \frac{P}{1 - P^{*(r \bmod \frac{1}{P})}}$$

For nodes that are not group head in the last 1/Prounds have been otherwise, T1 (n) to zero. Here Pis, the desired percentage of the group and the RIS the round power is progressing. Using this algorithm, every node is a group head precisely once within 1/Prounds. After Round 1/P- 1 T1 (n)= 1 for all nodes that have been no group head.

The time limit-leach protocol works in three phases: group you are setup and data transmission, group-member housing. In this Protocol the author improve the lye, something of group head during the setup phase in the liquor chose where re-elected as the heads of the group level 2 to communicate with the base station. This Protocol uses two group main layers to intra-group communication to reduce energy consumption.

The EECS protocol (energy-saving render draft), dynamic editing groups takes place at group distance from the base station is based[5]. The results are an algorithm that addresses the problem that groups in a larger distance from the tub more energy than the transmission requires that are more accurate. Finally, it presents the same distribution of energy in the networks with the result of the network life time. This is

the main advantage of this algorithm in the full context can be used during a longer duration. So we can say that it is a reliable detection capabilities to a larger range of networks for a longer period of time.

In attention send protocol selects the group heads, the residual energy and the minimum level of performance required by a node for communication with its Group Head are based, and in the group header data to data sink using a multihop communication approach.

$$CH_{prob} = \frac{C_{prob} \times E_{residual}}{E_{max}}$$

In SEECH protocol An algorithm called new distributed energy-saving grouping hierarchy (SEECH), the CHs selects and separately and is based on the new node aptitudes. In this way will be ups and downs degrees or node while the CHs and relays[2][6].SEECH a new distance-based algorithm is used. This protocol performs start phase before the first round. In this phase is calculated each node something necessary information about his situation as its distance from the sink and the number of his neighbors a specific radius RNG. The collected information will be shared with other nodes. At the end of this phase, each node simply his degrees $degi = n_i / \max \{n_1, N_2, \dots, n_N\}$. Calculated information will be in the next round. Grouping similar to many other high-level energy nodes of the protocols are preselected, while group goes ahead and rotation changed, but in SEECH protocol of the location of each node is considered it so expensive intra-group communications could be avoided.

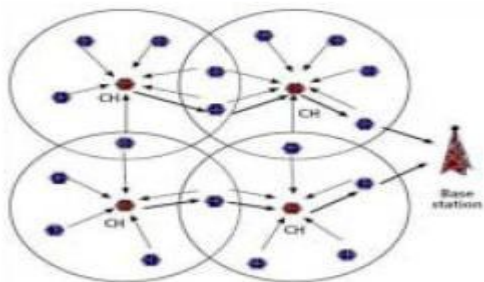


Fig.1. The node category in SEECH Protocol

II. ZONE-BASED GROUP

One of our main objective, for the energy-saving route selection protocol to design. We know that the performance of systems of the wireless network from the distance between the node and the base station depends on the quantity of data to be transmitted and of performance of grouping together by the large selection of group heads affected, the responsible for the manufacture of groups and the

control of the Member node[7]. This algorithm makes the best use of the node with a small number of the group head is known as relay node. Here we share the full region in the same zone 4 and the center area of the region is used to pre-select for group head the group into the wireless sensor networks (systems of wireless network) is the process of dividing the nodes of the system The wireless network into groups in which each group has a central node is agreed, called the group header for the acquisition of sensory data of all members of the group and is responsible for the Relay node sends, collects it and sends it to the base station. It can be the energy consumption of the network and the network balance extend life time. In the zone is based refers render algorithm, the area in the square mesh, the zones. In this algorithm is communication between the sensor nodes for the CH-selection is reduced so that the energy consumption for CH-selection can be reduced. The probability of a node to be, to CH is p , in which p is the maximum number of CHs in the network. CHs organize and control the group members in your group. All nodes must have a connection with a CH manufacture by his group to connect. The CH each zone sends the connection request to the nodes only its neighboring zones. On the basis of distance select the node a CH, close to him. Sensor nodes send CHs and CHs data to the base station. Group Head is for data accumulation and compression is responsible that the reduced energy consumption for data transfer.

III. CHAIN FORMATION

A chain using a greedy algorithm that the most nodes away from the base station, exit before the first round is formed. During the chain formation process by the greedy algorithm, select sensor nodes the next node as the following node. In the chain formation process we take a certain threshold value, if the energy of the Relay node is greater than threshold value data directly to the base station, if the energy of the Relay node is less than the threshold value data then send to the next relay of the neighboring region to the base station[13]. The nodes far away from the base station can not die earlier. So we can have a long-distance communication between nodes. Finally reduces the network life time of this cause.

IV. CHAIN FORMATION

Hwa Young Lim et al. [8] for solving the problem of the liquor a routing protocol that the routing protocol maximum energy is based on strong head (mesh), as is proposed. In this protocol is the data collected by the group head, send to the base station by the node that is known as the "strong head". Simulation results show that energy consumption and the life time of the network improved.

Chi-Tsun Cheng et al. [9] proposed a delay-conscious data acquisition system network for the wireless network. Through this network structure is delays in the data collection processes of the system of the wireless network that is reduced. The network structure for centralized and decentralized approach to construct, there are two network training algorithms designed. By Computer simulation is performance of the network structure is evaluated. Simulation results show that the proposed network structure is capable of the delays in the data collection process compared with other network structure to shorten significantly.

Yan Shen, et al. [10] is proposed in this paper. Based on the entropy theory according to the node status, such as data processing equipment is the residual energy and the number of bars, a cost function described in this method. To dynamic test tasks particle swarm optimization algorithm is used to optimize. Due to the changes in the sensor network, the tasks are dynamically adjusted. Simulation results show the life of the network will be improved and energy consumption and execution time is reduced.

Nagarajan.M., Dr. P. Karthikeyan [11] An algorithm for system of the wireless network that the life time of sensor nodes increase. Only a few sensors are in the Active state in the covered regions and the remaining are in the ideal. All nodes change their status from the ideal to active and active to the ideal period of time. Active nodes are in the active state or not by node checks, the ideal short-time section and are ideal node active if any failure in the region. This process is periodically, if active node in the direction of the data, which the energy of ideal node is saved and used when you active. The performance of the proposed algorithm is 6 times better than the existing algorithms and from him to the optimum enhancement in the network is near.

Jia Xu et al., [12] proposed a revised group path selection algorithm for the hierarchical routing protocol to increase liquor known as E-leach. The way of the choice of the group heads in the alkali is uncommon and the lap time is for selecting fixed. In the E-leach algorithm we consider the residual energy of the sensor nodes to network loads to balance and changes the lap time will depend on the optimal group size. The simulation results show that the life time of the network by 40% compared to alkali-algorithm is increased.

V. CONCLUSION

Energy Saving protocol to design is very important. In this paper is our primary focus increase the network life time of the wireless sensor network on. It is hoped that this detailed discussion of useful insight into the various concepts

and further progress in the field of charging. This can Density-based energy-saving break end protocol can be used to make the energy to a large extend to improve.

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