HEF Clustering for Secure and Efficient Data Transmission in CWSN

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Abstract

Among the modern wireless networks, wireless sensor network plays a prominent role. Bunch reduces the general energy consumption. In this paper HEF (High Energy First) bunch protocol is employed. This protocol provides improved network time period since the energy level of the nodes are considered while choosing the cluster head. The cluster area is fashioned dynamically and sporadically. The cluster heads are usually having more resources (generally energy) on comparison with other nodes in the cluster. We tend to propose a globally trust management theme that enhance security in WSNs. In this trust management scheme, trust model takes 2 methodologies, trust from direct observation methodology and trust from indirect observation method. In direct observation methodology observer node gets trust value by exploiting theorem reasoning. On the other hand, with indirect observation trust value is obtained from neighbor nodes of the observer node. The trust value for this methodology is based on Dempster-Shafer theory. Combining these 2 trust models, we tend to get a lot of correct trust values that results the effectiveness of our methodology.
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References


Index Terms

Computer Science

Security
**Keywords**

- Wireless Sensor Networks (WSN)
- High Energy First (HEF)
- Dempster-Shafer theory
- Harmonic Search Algorithm (HSA)
- Cluster Head (CH)
- Base Station (BS)
- Cluster based WSN (CWSN)