FAULT NODE DETECTION AND RECOVERY IN WIRELESS SENSOR NETWORK USING SIA ALGORITHM

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ABSTRACT
It is a set of communication nodes planted, without previous planning, in the environments in which we need to collect data and provided with various types of sensors to collect the needed information. It may also contain processing unit to process data or used only to transmit time series of the sensed phenomena to other node. WSN by a lot of immobile node and with the limited energy and without further charge of energy. Whereas extension of many sensor nodes and their operation. Hence it is normal Inactive nodes miss their communication in network, hence split the network. For avoidance split of network, we proposed a fault recovery corrupted node and Self Healing is necessary. Eventually we evaluated and compare this proposed method against previous method and we demonstrate our model is better optimization than other method such as (SIA) Swarm intelligence algorithm, in energy consumption rate. In this Thesis, we design techniques to maintain the cluster structure in the event of failures caused by energy-drained nodes. Initially, node with the maximum residual energy in a cluster becomes cluster heed and node with the second maximum residual energy becomes secondary cluster heed. Later on, selection of cluster heed and secondary cluster heed will be based on available residual energy. The results indicate that the SIA based fault-tolerant routing protocol outperforms several other protocols due to its capability of fast routing recovery mechanism, reliable communications, and prolonging the lifetime of WSNs.

KEY WORDS: Wireless Sensor Networks, clustering, fault detection, fault recovery, SIA.

VIII. REFERENCES


