A flooding attack in a wireless sensor network consumes the energy of the sensor node included in the path in the process of sending a persistent false packet to the base station. If a flooding attack is continuously generated, the sensor node with a low residual energy causes energy depletion and the life of the sensor networks is shortened when the number of sensor nodes having depleted energy is large. To prevent such attacks, a flooding prevention scheme was proposed. However, flooding attack prevention does not consider cases where the residual energy of the sensor node is low. In areas where the sensor node is installed a long time ago, the remaining energy of the sensor nodes remains low. For this reason, when the flooding attack prevention method is used to prevent flooding attack, energy depletion occurs in the detection process in the sensor node with low residual energy. In this paper propose a method to improve the energy efficiency of a sensor node by determining an efficient path during routing by adding message authentication code through fuzzy logic or by using flooding attack prevention when setting a path.
Fuzzy Logic based Efficient Route Determination Method for Improving the Energy Efficiency of Sensor Networks in FAP-based WSNs

References


Index Terms

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Keywords