Abstract

A sensor node in WSNs has limited resources (e.g., memory capacity, battery power etc.) and among all, energy is the most crucial factor because refilling or recharging of power is not possible here. There are many possible ways to conserve energy in WSNs; data aggregation is one of them. Applications of WSNs cross a broad scale including environment monitoring, Habitat monitoring, monitoring Water and Air quality, Gas emission, etc. The above mentioned applications and many other needs Data Aggregation because here sensors frequently report sensed values to the Processing Elements without removing redundant and disused entries. This paper proposes Mobile Agent initiated Energy efficient Data Aggregation (MAEDA) approach to prolong network lifetime. This method skillfully integrates Mobile Agent (MA) with wireless sensor networks. The proposed method is emulated by MATLAB platform; our simulation results are very impressive and prove that MAEDA is able to save more energy in data aggregation as well as prolonged network lifetime than other existing one.


8. Mobile agents: A new software paradigm for distributed application development, CIS-white paper.


Mobile Agent Initiated Energy Efficient Data Aggregation in WSNs: MAEDA


Index Terms

Computer Science Wireless

Keywords

Sink, Mobile Agent, Data aggregation.