GENETIC ALGORITHM APPROACH FOR TARGET COVERAGE IN WIRELESS SENSOR NETWORK

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ABSTRACT

Wireless Sensor Networks (WSNs) technology is operated in various domains like home security, healthcare management, military applications, and so on. However, target coverage (TC) is one of the major exercises of WSN. Lots of energy-efficient TC issues have been proposed over the period. But, the underline principal of many of the proposed algorithms is Maximum Cover Set (MCS). Cover Sets (CS) are developed in MCS for sensor networks to observe the every target. It is challenging to achieve maximal CS and therefore, it is an NP-complete problem. Besides, the each node cooperates in constructing the CS and as results consumes significant amount of energy. Thus, we propose genetic algorithm based approach to optimistically manage the energy consumption for enhancing the WSN lifetime. The proposed method utilizes the few sensors to manage all the targets and simultaneously, enhances the sleep state of the node to extend the WSN lifetime. The proposed method assists in improving the performance of WSN by consuming less energy power.

KEYWORDS: *Genetic Algorithm; Lifetime; Sensor; Wireless Sensor Network*