A novel clustering algorithm for wireless sensor networks using Irregular Cellular Learning Automata

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Abstract

Wireless sensor networks are usually made up of a large number of sensor nodes. Such large networks require algorithms which can maintain their performance while the network size gets larger and larger. Clustering is a very efficient method which can help many algorithms become scalable to networks of large sizes. Recently, Irregular Cellular Learning Automata is proposed as a suitable modeling tool for many sensor networks' applications and a clustering algorithm is given for proving this suitability. In this paper, we improve the proposed clustering algorithm which leads to more efficient clusters in terms of number of clusters, number of sparse clusters, and energy level of cluster heads.

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