Abstract

Clustered sensor networks have shown to increase system throughput, decrease system delay and save energy. In this paper, we propose a bio-inspired clustering protocol inheriting the social behavior of Rhesus Macaque monkeys, targeting prolonged network lifetime. The behavioral features are added to the basic LEACH, thereby reducing the energy overhead involved in the set-up phase. The simulation results prove that implanting these kinds of bio-inspired intelligence into the pre-existing protocols will tremendously increase its performance.

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Index Terms

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Keywords

Clustered sensor networks  Rhesus Macaque monkey  network lifetime  LEACH protocol