Improvement of Leach Protocol with K Angle Optimization using an Optimized Algorithm in Wireless Sensor Networks

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Authors:
Ravneet Kaur
Deepika Sharma

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Abstract

In this paper we are implementing an advanced optimizes clustering algorithm to enhance network lifetime when LEACH protocol is used. Main concept behind the wireless sensors network is to save energy more and more so that it works last long enough. This is due to fact that the size of a sensor node is expected to be small and this leads to constraints on size of its components i.e. battery size, processors, data storing memory, all are needed to be small. So any optimization in these networks should focus on optimizing energy consumption to enhance WSN lifetime. For this various protocols and algorithms by various approaches are there to enhance WSN lifetime. One of the approaches is to optimize angle by which we virtually split sensors with grid. In various leach protocols we use circular grid by taking sink at the center of the network. But we cannot optimize angle by which we make grid, here in this paper we are going to implement a new approach to optimize angle with using an optimized algorithm to get better cluster formation and enhances our results. Algorithm used in the proposed scheme is GENETIC ALGORITHM (GA).

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**Index Terms**

Computer Science

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**Keywords**

Wireless Sensor Network  LEACH Protocol  GA