

Wireless Sensor Positioning Algorithm

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Spatially distributed sensors, which communicate wirelessly form a wireless sensor network (WSN). This network monitors physical or environmental conditions. A central gateway, called high energy communication node, collects data from all sensors and sends them to the central computer where they are processed. We need to minimize the number of sensors and energy consumption of the network, when the terrain is fully covered. We convert the problem from multi-objective to monoobjective. The new objective function is a linear combination between the number of sensors and network energy. We propose Ant Colony Optimization (ACO) algorithm to solve the problem.