

عنوان مقاله:

A LA Algorithm to solve imbalanced coverage in wireless sensor networks

محل انتشار:

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خلاصه مقاله:

One of the most important problems in wireless sensor networks is k-coverage that determines the orientation of a minimum number of wireless sensors so that each target can be monitored at least k times. This problem has been already considered in two different environments: over provisioned where the number of sensors is enough to cover all targets, and under provisioned where there are not enough sensors to do the coverage task (known as imbalanced k-coverage problem). Due to the significance of solving the imbalanced k-coverage problem, this paper proposes a learning automata-based algorithm capable of selecting a minimum number of sensors so that all targets can be provided with k-coverage in a balanced way. To evaluate the efficiency of the proposed algorithm performance, several experiments were conducted and the obtained results were compared to those of a greedy-based algorithm. The results confirmed the efficiency of the proposed algorithm in terms of solving the problem

کلمات کلیدی:

Visual sensor networks, Balanced coverage, k-coverage, Learning automata

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