

A Survey on Deployment and Coverage Strategies in Three-Dimensional Wireless Sensor Networks

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ABSTRACT

The deployment and coverage strategies are key issues in researches and the applications of WSNs, since it greatly influences the node energy, communication bandwidth and Quality of Service (QoS) for WSNs. The current literatures on sensor coverage control approaches mainly focused on the two-dimensional (2D) plane. However, many applications including underwater monitoring, indoor surveillance and others scenarios that are deployed on the three-dimensional (3D) space. This paper presents an extensive overview of various coverage and deployment problems and algorithms in three-dimensional wireless sensor networks. It focuses on different coverage strategies, vital characteristics, design schemes, advanced methods and practical constraints dealing with coverage and deployment in 3D WSNs.

KEYWORDS

Coverage efficiency; 3D WSN; deployment strategies

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