

# On Area Coverage Problems in Directional Sensor Networks

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## Abstract

A directional sensor network is composed of many directional sensor nodes. Unlike conventional omni-directional sensors that always have an omni-angle of sensing range, directional sensors may have a limited angle of sensing range due to technical constraints or cost considerations. Area coverage is still an essential issue in a directional sensor network which consists of a number of directional sensors. In this paper, we study the area coverage problem in directional sensor networks. The problem is to maximize the area coverage of a randomly deployed directional sensor network. We therefore propose two greedy algorithms for the problem. Simulation results show that our proposed algorithms outperform the previous proposed method in term of the area coverage.

Keyword : directional sensors; coverage; greedy algorithms