

Stable transmission trees on moving sinks of wireless sensor network

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In wireless sensor network WSN, data are collected and transmitted by a multi-hop way to one node called a sink. The neighboring node to sink is always responsible to such transmission and usually first dries out in WSN. Such situation is known as a hot spot problem. Recently, to solve such problem, moving sinks along boundary has been reported effective and attractive. In this paper, we restrict the structure of WSN to grid graph and discuss graph theoretically properties of such transmission trees seen in moving sink situation. It is known that stable transmission provides better communication performance as well as longer lifetime of WSN.

Keywords: wireless sensor network, transmission tree, moving sink