Results and Performance Analysis of Local Broadcast Algorithms in Wireless Ad hoc Networks: Reducing the Number of Transmissions

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Abstract

Among Many fundamental communication primitives in wireless ad hoc network, flooding in wireless ad hoc network reduces the number of transmission in network and it plays a significant role in which every node transmits the message after receiving it for the first time. To successfully reducing the number of transmissions of broadcast that are required to achieve full delivery and constant approximation to the optimum solution without using exact position information of node. This paper presents two main approaches such as static and dynamic to broadcast algorithm in wireless ad hoc network. In static approach node status depends on local topology and priority function of node using this approach it can't guarantee both full delivery and constant approximation if node exact position information isn't available. On other hand in dynamic approach if node exact position information is available or not they can achieve both full delivery and constant approximation to their optimum solution using their partial 2-hop hybrid algorithm.

References

Index Terms

Computer Science  Wireless
Keywords

Ad hoc network, Broadcasting, Connected Dominating Set (CDS), Constant Approximation.