Abstract

Ad hoc networks lack pre-designated routers and physical infrastructure, which makes routing in these networks a challenging task. To overcome the problems associated with this, virtual backbone has been proposed as the routing infrastructure of ad hoc networks. A well-known and well researched approach for constructing virtual backbone is Connected Dominating Set (CDS). It overcomes the broadcast storm problem and facilitates routing. In this paper, the focus is on the various CDS construction algorithms that have been put forth in the literature. A comparison of the major works relating to CDS construction is provided, emphasizing the type of algorithm, technique employed, performance metric used and the outcome achieved.

References


A Survey of Connected Dominating Set Algorithms for Virtual Backbone Construction in Ad Hoc Networks


**Index Terms**

Computer Science Wireless

**Keywords**

Ad hoc network, Connected Dominating Set, Virtual backbone