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عنوان مقاله:
Decreasing the Average Delay, Connectivity, and Routing Load in Clustered Mobile Ad- Hoc Networks

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خلاصه مقاله:
Clustering is an efficient method for increasing scalability in mobile ad hoc networks. In this method, several nodes called clusterheads are responsible for serving the nodes in their cluster. Choosing the optimal number of clusterheads can improve the quality-of-service metrics such as delay in clustered networks. There have been several studies to model the delay in mobile ad hoc networks with flat structure, but assessing the delay in clustered networks is still open research topic. In this paper, first we model the average hop count in clustered mobile ad hoc networks, and then, analytically, we show that an increased number of clusterheads increases the probability of new routes with lower hop counts and consequently, reduces delay in each connection. The effect of the number of clusterheads on average delay and two other metrics; connectivity and routing load is analyzed for two types of clustering methods: with and without gateways.

کلمات کلیدی:
Average Delay, Connectivity, Clusterheads, Routing Load, Hop Count

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