Abstract

The scalability issue is essential to gain commercial success in MANET. However, there are some existing constraints such as low bandwidth, node mobility, energy consumption, and the broadcast nature of wireless communication that make the network complex to maintain. Furthermore, as the network size increases, communication costs may consume a large proportion of the bandwidth. Other parameters such as node mobility, node density, and traffic load can also impair network scalability. In this research paper, we proposed a new algorithm, K-hop clustering scheme for Pseudolinear MANET (KHPM) where cluster topology remains stable in terms of K-hop and more dense network. The strategy used stability metric and Doppler Value (DV) between nodes, which exchanged packets obtained by Doppler shift. A node’s smaller DV indicates lower mobility with higher stability. The proposed technique has been analysis hypothetically, which shows that the proposed algorithm is able to consider mobility as a key feature compared to existing SKCA method. In addition, the number of hops of a cluster is twice in KHPM compared to existing THPM technique.
References

16. JY Yu and Peter HJ Chong. 3hbac (3-hop between adjacent clusterheads): a novel non-overlapping clustering algorithm for mobile ad hoc networks. In Communications,


Index Terms

Computer Science

Algorithms

Keywords