Abstract

A mobile ad-hoc network (MANETs) is a self-configuring infrastructureless network of mobile devices are connected by wireless. Each node in a MANETs is free to move independently in any direction, and it changes its links to other devices frequently. Accurate prediction of path duration will help to increase the performance of a routing protocol. Path duration is the minimum link residual life along the path to the destination consisting of individual links. Previous work done on this subject relied mainly on simulations. There is no analytical model in the literature that includes node density that can be used for estimating path duration in a MANETs. Due to the highly unpredictable nature of mobile nodes, it is a challenge to model path duration. This paper proposes an analytical model for estimating the path duration in a MANETs and city section mobility model, the accuracy of the proposed model is validated by comparing the results obtained from the analytical model with the experimental results available in the literature and with the results of simulations carried out in NS-2. 28.

References


Index Terms
Keywords
MANETs performance city section mobility model