A novel on-demand routing protocol based on route stability estimation for mobile ad hoc network

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Abstract

Mobile ad hoc networks (MANETs) mean wireless multi-hop networks form by a set of mobile nodes without relying on a preexisting infrastructure. This presentation introduces the critical issues and applications of MANETs. Due to the time-varying topologies and unstable radio links, existing routing protocol such as ad-hoc on-demand distance vector (AODV) routing protocol could not provide satisfactory performance for MANETs. A novel on-demand routing protocol, which is modified from AODV routing protocol, . is proposed here to discover and maintain stable routes for required wireless services in mobile ad hoc networks. The main difference between proposed protocol and AODV is the new method of route stability estimation based on the stochastic radio propagation model, which can be used to properly and effectively find stable routes. Simulation results indicate that the proposed protocol improves bandwidth utilization efficiency and data throughput