Abstract

To prolong the network operational time, a lot of attention has been paid towards designing
energy aware routing protocols. Selection of energy efficient routes, while minimizing the overhead incurred in the selection of the routes is the principal concern in designing energy aware protocols. Some existing energy aware routing algorithms can optimize the energy use. But there are certain limitations as the existing algorithms suffer with expensive overheads involved in collection, storage and exchange of the state information. These algorithms can be further refined in order to make them scalable. Wireless ad hoc networks usually depend on mobile battery operated devices that communicate over the wireless medium. These computing devices need energy conservation so that the battery life is enhanced. Since battery power is constraint, the wireless communication is the short continuous operation time of mobile terminals. Thus energy awareness is an important criteria for developing new ad-hoc routing protocols in Mobile Adhoc Networks (MANETs). This paper presents the mobility and traffic impact on energy consumption behavior of two adhoc routing protocols Adhoc On Demand Distance Vector Routing (AODV) and Dynamic Source Routing (DSR). Both of the protocols are simulated and compared over different network scenarios for various energy related performance parameters. Simulation results shows that for some of the parameters DSR is a better choice in terms of energy consumed and left after a simulation round but for some parameter like exhausted number of nodes AODV is a better choice.

References


Index Terms

Computer Science

Networks

Keywords

Routing Adhoc Networks Aodv Dsr Energy Ns-2