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