

Performance comparison of AODV, DSDV and I-DSDV routing protocols in mobile ad hoc networks.

ABSTRACT

Ad hoc networks are characterized by a lack of infrastructure, and by a random and quickly changing network topology; thus the need for a robust dynamic routing protocol that can accommodate such an environment. To improve the packet delivery ratio of Destination Sequenced Distance Vector (DSDV) routing protocol in mobile ad hoc networks with high mobility, a message exchange scheme for its invalid route reconstruction is being used. Three protocols AODV, DSDV and I-DSDV were simulated using NS-2 package and were compared in terms of packet delivery ratio, end to end delay and routing overhead in different environment; varying number of nodes, speed and pause time. Simulation results show that I-DSDV compared with DSDV, it reduces the number of dropped data packets with little increased overhead at higher rates of node mobility but still can't compete with AODV in higher node speed and number of node.

Keyword: DSDV; Link breakage; Message scheme; Ad hoc networks.