ANALYSIS OF DESTINATION-SEQUENCED DISTANCE VECTOR (DSDV) AND AD-HOC ON-DEMAND DISTANCE VECTOR (AODV) PROTOCOLS

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ABSTRACT

Routing protocols is very beneficial for mobile ad hoc network in terms of both performance and reliability. Mobile Ad-hoe Network (MANET) is decentralized network which needs a robust dynamic routine protocol. We have studied the following protocols: Dynamic Source Routing (DSR), Ad-hoc On-demand Distance Vector (AODV), and Destination-Sequenced Distance Vector (DSDV) routing protocol. Nodes of these networks functions as routers which discovers and maintains the routes to other nodes in the network. Due to mobility, connections in the network can change dynamically and nodes can be added and remove at any time.

We have compared Mobile Ad-Hoc network routing protocols DSDV, AODV using network simulator NS2.34. Compared the performance of two protocols together and individually. The performance matrix includes PDR (Packet Delivery Ratio), Average End to End Delay, Routing Overhead. We are comparing the performance of routing protocols in two scenarios. In the first one we have calculated PDR, Average End to End Delay, Routing Overhead in an area of $50*50m^2$ taking number of nodes 20 & 50, varying the mobility of node as 0, 1m/s, 5 m/s and 10 m/s for a simulation time of 50 seconds to 150 seconds. In the other scenario we measured the performance of PDR of AODV and DSDV in an area of $500*500m^2$ for 50 nodes changing the data rate as 1 mbps, 5 mbps, 10 mbps for a simulation time varying from 5 minutes to 30 minutes.

KEYWORDS: MANET, AODV, DSDV, Infrastructure Network