Performance evaluation of IDSDV over DSDV for specific traffic pattern.

ABSTRACT

Mobile Ad-Hoc Networks is an infrastructure less mobile network having mobile nodes entering and leaving the network freely at any time. The decentralized nature requires every node plays a router role and have its own routing table to other nodes in the network. Many categories of routing protocol exists, in this paper we studies one that is based on routing strategy that employs proactive approach namely DSDV and IDSDV. DSDV protocol is known to have a low performance in packet delivery ratio due to stale route problem. In case of link breakage, it is incapable of providing an alternative route. IDSDV addresses this issue by introducing a novel message exchange scheme for reconstruction of broken route, to allow packet to be transmitter and thus increases the performance. Many have reported this improvement, but none of the tests were meant for individual traffics pattern. Based on selected metrics, we re-evaluate the performance of IDSDV over DSDV for TCP traffic, with respect to chosen mobility model, varying number of nodes, pause time and nodes speed. Simulation result shows that the performance of IDSDV outclasses DSDV with respect to routing overhead metric. Meanwhile for packet delivery fraction metric, both protocols are almost equally performed.

Keyword: MANET; Random waypoint; TCP; Proactive; Routing overhead.