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## Abstract

A Mobile Ad-hoc Network (MANET) is a collection of wireless mobile nodes that communicates with each other without using any existing infrastructure or centralized supervision. A major design issue for an efficient and effective routing protocol for real MANETs is, therefore, to achieve optimum values of performance parameters under network scenarios where nodes are subjected to different types of mobility that dynamically change the network topology. In this paper, I am comparing the performance of five prominent Mobile Ad-hoc Network (MANET) protocols. My simulative study on MANET routing protocols and mobility models aims to determine the performance of current MANET routing protocols with respect to various mobility models implemented in GloMoSim 2.0.3 simulator. I compare a number of routing protocols including AODV, DSDV, DSR, LAR1 and WRP and the performance analysis is based on different network metrics such as Average End to End delay, Throughput, Collisions and Energy Consumption for both stationary and mobile nodes. The results of my extensive network simulations are tabulated along with a comprehensive analysis. The effort allows a fair comparison of the capabilities and limitations of different types of mobility patterns and their suitability for contemporary MANET routing protocols.

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### **Index Terms**

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### **Keywords**

Protocols MANET DSDV AODV DSR LAR1 WRP GloMoSim 2.0.3