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**QoS-Enabled Optimized Adaptive Multipath AODV Protocol**

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**Abstract**

MANET is an infrastructure less wireless network. The on demand routing protocol AODV provides an efficient performance in the routing process of the ad hoc networks. The distance vector is the basis of the AODV reactive routing protocol. The criterion set for selecting the route is done on the hop count basis in the AODV routing protocol. This proposed protocol OAM-AODV (Optimized Adaptive Multipath AODV Protocol) provides a more efficient optimal routing in the ad hoc network. This protocol provides optimal path selection and avoids the frequent occurrence of link break. The protocol monitors the selected optimal path and predicts the chances of link break and switch over to alternate path and continue transferring of the data from sender node to the receiver node and increase the throughput. It reduces the number of route discoveries by using the alternate paths selected from the multiple paths and reduce the number of control overhead. It decreases the time delay in transmitting packet by starting transmission of data immediately on finding the first path and then move onto the optimal route depending on the criterion set on the energy level of node, signal strength of the link and hop count and continue transmission. It reduces the packet drop ratio by switching over to alternate better optimal path before link breakage occurs by unicasting MONITOR message for monitoring each paths criterion value. Simulations are performed using the network simulator NS-2. The results obtained from the performed simulation clearly depicts that the proposed protocol performs more efficiently than the existing AODV protocol.

**Keywords:**

Mobile ad hoc network (MANET), AODV protocol, Signal strength

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