ABSTRACT

For any Multimedia application the Quality of Service (QoS) parameters are the Bandwidth, Jitter and Delay. The task for QoS provisioning becomes more challenging when it comes for the ad hoc wireless networks due to the dynamically changing topology. The Routing protocol available such as AODV, DSR and DSDV does not provide any guarantee to be used for multimedia application. AODV protocol provides single path and is on-demand. It requires periodic updates of the adjacent neighbours. DSDV protocol provides single path and periodic updates whenever there is change in routing table. DSR protocol is based on source routing, suffers from the scalability problem.

The main focus of this new protocol is to reduce the delay that incurred in the AODV and DSR routing protocol and to decrease the packet loss ratio that incurred in the DSDV routing protocol. This protocol is based on on-demand basis. Delay is reduced by establishing more than one path to destination and transmitting the packets to the path where the hop count is less than other available paths. The packet loss ratio is decreased by controlling on the dissemination of control information into the network, which has higher priority than the data packets.

This new protocol is implemented in NS-2. This protocol discovers multiple paths towards destination and the packets are transmitted to path where hop count to reach the destination is less. Delay is also reduced in terms of time needed to find a new path to the destination when the link breaks which occurs in other routing protocols like AODV and DSR.