Abstract

Mobile Ad-hoc Network (MANET) is a network with structure less self organizing an autonomous system of mobile nodes which are connected by wireless links. In this work an attempt has been made to compare the performance of three MANET Routing Protocols, such that Pro-active Routing Protocol: OLSR (Optimized Link State Routing Protocol), Reactive Routing Protocol: AODV (Ad-Hoc on Demand Distance Vector), Hybrid Routing Protocol: GRP (Geographic Routing Protocol) by using two different applications i.e. High Definition Video Conferencing and High Load FTP generating different types of data in the networks under different nodes densities (20, 40, 60 and 80) in the networks. All the networks are simulated by using a discrete event simulator OPNET 14.0 and results are gathered by using different performance evaluation metrics. After the intensive simulation, it has found that the hybrid protocols (GRP) outperforms both reactive (AODV) and proactive (OLSR) protocols.

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**Index Terms**

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**Keywords**

MANET  OLSR  AODV  GRP  OPNET