2016 IEEE Mobile Adhoc Network PROJECT LIST BASED ON NS2

1. Energy aware multicast routing in mobile ad-hocnetworks using NS-2

The nodes in MANET are constrained with limited power for their vital operations since the connectivity of the network will go down as soon as node energy gets exhausted. Node failures due to power constraints cause system failures and hence minimizes end-to-end connectivity in the network. In recent years, majority of research on multicast routing protocols in MANET focus upon the mechanisms to build energy efficient multicast routes based upon shortest paths and energy consumption for various transactions at node level. In this paper, we propose an Energy Aware Multicast Routing Protocol (EAMRP) which maximizes end-to-end connectivity in the network and minimizes faults at link or/and node level. A set of multiple paths are established from source to multicast destinations using energy efficient neighbor node selection mechanism. Our scheme operates in following phases. (1) Computation of residual energy of a node using node energy model. (2) Pruning the nodes having residual energy less than threshold value. (3) Discovery of multiple routes to the destination using request and reply packets, (4) Selection of stable routes by considering residual energy of the nodes. (5) Route maintenance for route breaks and node failures due to energy drain and (6) Simulation analysis for various parameters such as Packet Delivery Ratio (PDR), and end-to-end delay has been performed. We observe that EAMRP outperforms the energy efficient AODV and AOMDV protocols for various performance Parameters.

2. Performance Evaluation of Manet Using Quality of Service Metrics.

An ad hoc network is a collection of mobile nodes dynamically forming a temporary network without the use of any existing network infrastructure or centralized administration. Several routing protocols have been proposed for ad hoc networks and prominent among them are Ad hoc On Demand Distance Vector Routing (AODV) and Dynamic Source Routing (DSR). Effort has been made to merge software Quality assurance parameters to adhoc networks to achieve desired results. This Paper analyses the performance of AODV and DSR routing protocols for the quality assurance metrics. The performance differentials of AODV and DSR protocols are analyzed using NS-2 simulator and compared in terms of quality assurance metrics applied.

3. Quality of Service Routing for Multipath Manets.

Adhoc network design goal is to provide internet access anytime characterized by lack of infrastructure and absence of base station, mobility and heterogeneity which require a dynamic efficient routing protocol. We proposed a delay energy aware routing protocol called as reactive congestion aware multipath routing protocol-RCRP aim to select the route based on energy reduction rate and packet delivery time it address . Two important characteristics of mantes:

improving life time of networks and avoiding congestion.

It consider the node energy reduction rate(ERR) and packet delivery time(Pdt) to compute the delay energy drain rate(d.e.d.r) optimistically with respect to current energy and traffic condition.

The simulation result shows that this work is better than existing AOMDV and MM-AOMDV in terms of networks life time and end to end delays by using NS2.

4. Power Aware and Topology Aware Ad-Hoc On-Demand Multipath Distance Vector Routing For Manet.

The objective of this work is to improve the performance of a MANET multi-path routing protocol without increasing or decreasing its default transmission range of the nodes. The proposed work is to control the routing process and only allow hops with maximum possible distances in a route based on the received signal strength at each node. We propose topology aware and power aware ad hoc on-demand multipath distance vector routing protocol based on the
maximum transmission range. We call this model as AOMDV_RR Range Routing and implemented it under ns2 by improving the standard AOMDV protocol. We studied the proposed AOMDV_RR and the standard AOMDV under different network densities and measured the performance for suitable metrics. Measurable difference in performance was realized and the proposed AOMDV_RR performed better than normal AOMDV with respect to metrics network overhead, throughput and energy consumption.

5. Impact of realistic simulation on the evaluation of mobile Ad-hoc routing protocols