

## LIST OF FIGURES

Figure No.	Figure captions	Page No.
1.1	Structure of the Networks	1
1.2	Mobile ad hoc network	2
2.1	Classification of manet routing protocols	9
2.2	AODV working Structure	21
2.3	Classification of mobility models.	28
3.1	Topology run shot of the simulation in Qualnet for case 1	41
3.2	Good put performance with minimum side length between pair of nodes & fixed simulation area 500x500.	43
3.3	Good put performance with minimum side length between pair of nodes & fixed simulation area 250x250.	43
3.4	Shows the topology of the simulation in Qualnet for case 2.	44
3.5	Computation time performance with network-size & simulation area 500x500.	44
3.6	Computation time performance with network-size & simulation area 250x250	44
3.7	Memory usage performance with nodes increment & simulation area 500x500	45
3.8	Memory usage performance with nodes increment & simulation area 250x250	45
3.9	computation time performance with change in simulation Area for fixed network size 200 nodes	45
3.10	Throughput under variable node density	47
3.11	End to end delay for variable node density	48
3.12	End to end delay for variable node density (lower values)	48
4.1	Post disaster mitigation layered rescue model	56
4.2	Movement in A-RPGM, providing two snapshots at time $T=t_0$ (left circle) and time $T=t_0+\Delta t$ (right circle)	57
4.3	Group mobility view	58
4.4	Logical Setup of Framework	60
4.5	Layer to layer movements	60
4.6	Packet delivery ratios for AODV, OLSR & ZRP for the defined -case a	64

4.7	Packet delivery ratios for AODV, OLSR & ZRP for the defined -case b	65
4.8	Packet delivery ratios for AODV, OLSR & ZRP for the defined -case c	65
4.9	Normalized packet delivery ratios for AODV, OLSR & ZRP for group mobility-case a	66
4.10	Normalized packet delivery ratios for AODV, OLSR & ZRP for group mobility -case b	66
4.11	Normalized packet delivery ratios for AODV, OLSR & ZRP for group mobility-case c	67
4.12	Simulation design model	69
4.13	LAR BOX -P Protocol	71
4.14	LAR Step Protocol	72
4.15	PDR versus scenario x -Ranomize movement	76
4.16	PDR versus scenario x - 4 way directional movement	76
4.17	End to End delay versus scenario x -Ranomize movement	76
4.18	End to End delay versus scenario x -4 way directional movement	77
4.19	NRL versus scenario x -Ranomize movement	77
4.20	NRL versus scenario x - 4 way directional movement	77
4.21	DPF versus scenario x -Ranomize movement	78
4.22	DPF versus scenario x - 4 way directional movement	78
5.1	Chart of reasons for Packets dropping	88
5.2	Watch-Dog technique	93
5.3	TWO-ACK Method	94
5.4	Receiver collisions	96
5.5	Limited transmission power	97
5.6	False Misbehavior acknowledge	97
5.7	Case 1-Packet delivery fraction	101
5.8	Case 1-Routing overhead	102

5.9	Case 2-Packet delivery fraction	103
5.10	Case 2-Routing overhead	104
6.1	RWP Mobility	110
6.2	Pattern of SROA Mobility Method	112
6.3	Snapshot of simulation	115
6.4	packet delivery fraction with obstacle avoidance	117
6.5	Average end to end delay with obstacle avoidance	118
6.6	Average broken links versus node speed	120