

Figure 6 remaining energy

Simulation results are obtained by varying the number of nodes from 10 to 60. The performances of the proposed model and the existing method are compared. Figure 6 and table 4 shows the proposed model with improved packet delivery ratio, when number of nodes is increased from 10 to 60 compared to the existing method. It is clear that out of CH-RNSR design surpasses DSR performance by 14.67% when there are 10 and 60 of nodes in the network. From the results, it is concluded that the randomly selection based scheme is able to detect malicious node with avoid link breakage and also fine minimum distance route in the presence of false misbehaviour nodes, so delivery ratio increased from start to end of the network with proof from above statement receive more packets from active nodes.

Table 5 simulation result of packet delivery ratio vs number of nodes

RP/NN	10	20	30	40	50	60
DSR	0.82	0.74	0.69	0.65	0.61	0.57
CH-RNSR	0.91	0.85	0.80	0.76	0.72	0.68

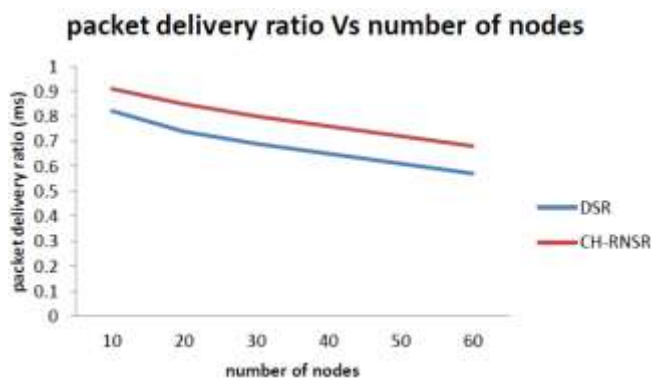


Figure 6 packet delivery ratio

Simulation results are obtained by varying the number of nodes from 10 to 60. The performances of the proposed CH-RNSR and the existing DSR are compared. Figure 6 and table 5 shows the proposed model with improved packet delivery ratio, when

number of nodes is increased from 10 to 60 compared to the existing method. It is clear that out of CH-RNSR design surpasses DSR performance by 10.67% in the network. From the results, it is concluded that the randomly selection based scheme is able to detect malicious node with avoid link breakage and also fine minimum distance route in the presence of false misbehaviour nodes, so delivery ratio increased from start to end of the network with proof from above statement receive more packets from active nodes.

Table 6 simulation result of routing overhead vs number of nodes

RP/NN	10	20	30	40	50	60
DSR	0.11	0.16	0.20	0.31	0.36	0.42
CH-RNSR	0.06	0.12	0.16	0.24	0.32	0.38

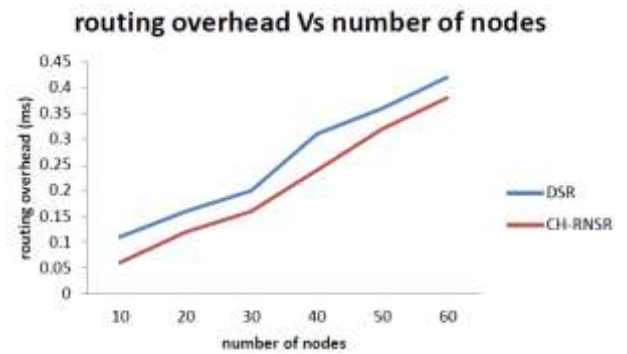


Figure 7 routing overhead

Figure 7 and table 6 compare the routing overhead performance of the proposed CH-RNSR and existing on-demand routing protocol scheme. New scheme has reduced routing overhead with the number of nodes from 10 to 60 when compared to the existing method as show in figure 7 suggested new method has the reduce routing overhead by 4.67% than DSR, although suggested scheme requires to avoided unwanted passive nodes reason of this decreasing conjunction from throughout network due to selection two active relay nodes with randomly.

Table 7 simulation result of throughput vs number of nodes

RP/NN	10	20	30	40	50	60
DSR	0.39	0.35	0.31	0.27	0.23	0.19
CH-RNSR	0.58	0.53	0.48	0.43	0.38	0.33

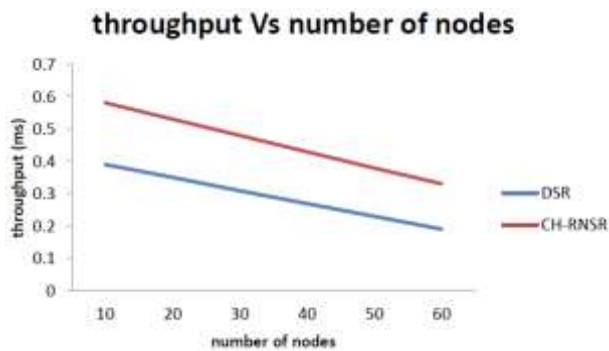


Figure 8 throughput

Simulation results are obtained by varying the number of nodes from 10 to 60. The performances of the proposed CH-RNSR and the existing DSR are compared. Figure 8 and table 6 shows the proposed model with improved successfully delivery ratio (throughput), when number of nodes is increased from 10 to 60 compared to the existing method. It is clear that out of CH-RNSR design surpasses DSR performance by 16.5% when there are 10 to 60 of nodes in the network. From the results, it is concluded that the randomly selection based scheme is able to detect malicious node with avoid link breakage and also fine minimum distance route in the presence of false misbehaviour nodes, so delivery ratio increased from start to end of the network with proof from above statement receive more packets from active nodes.

5. Conclusion

Cluster head model based primary and secondary selection transmission scheme becomes essential and is very safe with high security. In this research, a proposed routing protocol named energy consumed CH-RNSR with random selection work, the simulation results minimizing average end-to-end delay by 15.5% when there are 10 to 60 nodes in the network, increased delivery ratio performance by 10.67%, throughput performance by 16.5% when there are 10 and 20 nodes in the network respectively, 10 to 40 when compared to the existing method and suggested new method has the reduce routing overhead by 4.26% when there are 10 to 60 nodes in the network and it is clear that the proposed approach maximized remaining energy by 14.67% with the number of nodes 40 through the NS 2. Developed new model not only reduces overhead, but also solves packet dropping problem using relay algorithm. Plan to investigate the following issues in our future research.

- The same concept can be tried to implement in satellite to save more energy.
- The possibilities of adopting the cluster based network to eliminate the delay.

- CH-RNSR can be tested in real time network environment.

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