CHAPTER 5

CONCLUSIONS

This chapter summarizes the contributions made by this research work by proposing two different methods for high speed secure data transmission in grid computing. Also the experimental findings from the work carried out and finally suggestions for future research are applied. In the proposed method Sleep and Awake Scheduling protocol is only activate the node whenever it will use by transmitting the data on grid computing. The proposed algorithm achieves more robust performance and higher speed over conventional scheduling algorithm. The system correctly recognizes the node schedule and the performance is suitable for real time implementations as found out from the experiment. The methods facilitates a group of nodes can be detected in real time with high recognition accuracy.

The higher level of the approach implements the scheduling protocol based on Sleep and Awake scheduling algorithms. In the aggregation of data using sleep schedule, the information is securely collected in the grid to share information all over network uploaded to sink in smart grid. By controlling congestion the time delay is reduced and Packet delivery ratio is improved. In future may propose a multi hop technique packet transmission up to reach target point. Every Mobile collector gets information from sensor node, in movable mobile collector for dynamic network finally reach the target and upload that particular information to sink node. However, more features
increases the training complexity and reduces the detection accuracy. We select the optimal features, instead of using all features in the training process. The proposed method can be applied for the applications smart grid computing environment. The performance of proposed algorithm is analyzed by the statistical measures.

5.1 SUMMARY OF CONTRIBUTIONS

To ensure the performance of the network used by user is measured by Quality of Service (QoS) and is most important in the aspects of error rates, bandwidth, throughput and transmission delay. Multiple control domains can be integrated by the grid computing and also the sharing the data in the network and make the secure transmission is very difficult among those networks. Here, such kind of problems are analyzed and proposed Enhanced QoS-Oriented Distributed routing protocol (EQOD) in the grid computing environment and provided the results for most suitable methodology to make more secure data transmission in this network environment. A QoS-Oriented Distributed routing protocol (QOD) to enhance the QoS support capability of hybrid networks. Enhanced QoS-Oriented Distributed routing protocol (EQOD) is mobility resilient than QOD. The EQOD improves the throughput and decreased the overhead. Hence this model shows that EQOD can provide high QOS performance in terms of overhead, transmission delay and throughput.

The Smart grid reliability consideration in communication system has a direct or immediate impact on the reliability of the entire power infrastructure wherein millions of smart devices are interconnected throughout critical power facilities via communication networks sleep scheduling is a technique proposal where all the nodes are not awake all the time, hence only
less amount of energy is consumed during the transmission of packet at the time of execution. A process where the nodes wake up only during packet transmission and reception time is called Sleep Scheduling, where it increases the network lifetime, else it opts sleep time.

The Network Simulator (NS2) tool is used for the proposed algorithm testing and simulation purpose. The testing scenario, the nodes coverage area is specified within the limit of 1000 meter x1000 meter. The coverage is region the nodes movement is simulated time is 58 seconds. The communication area of the nodes is 500 meters. The presented results are proved that the proposed method achieved the expected output and minimize the energy consumption. Although there is numerous works in this area, there is still need for a protocol which can schedule node operation in an efficient and adaptive manner without requiring location information, global network knowledge and the use of excessive control messages.

5.2 SCOPE FOR FUTURE RESEARCH

The performance of the proposed scheme is evaluated in terms of (i)Energy Consumption (ii) Packet delivery ratio (iii) Packet loss (iv) Retransmission rate (v)Delay (vi) Network lifetime and Efficiency.

The changes in the scope and implementation of proposed method have caused two main challenges

1. With the help of this algorithm best schedule is recognized with a suitable probabilistic measurements from the recognized nodes of grid computing and implement complete algorithm in the suitable hardware to evaluate the real time performance.
2. To improve the life time of the network, an efficient algorithm will be identified to reduce the transmission delay and more secure data transmission in grid computing environments.