QOS ORIENTED DISTRIBUTED ROUTING PROTOCOL FOR HYBRID WIRELESS NETWORKS

[1]S.Ramya, [2]B.Lakshmi.

[1]PG Scholar, Department of Computer Science and Engineering, Mohamed Sathak Engineering College, Ramanathapuram, India.
[2]Assistant professor, Department of Computer Science and Engineering, Mohamed Sathak Engineering College, Ramanathapuram, India.

Abstract: Wireless communication play important role in network due to popularity, supporting real-time transmission with QoS requirement. The wireless hybrid network integrates with mobile wireless ad hoc network (MANET) and a wireless infrastructure network for next generation wireless network. For MANET, the resource reservation based QoS is adopted but the hybrid network inherits some problems such as invalid reservation, race condition problems and so on. This Project proposes QoS-oriented Distributed routing protocol (QOD) for providing the QoS- services. For this purpose QOD uses five different steps to provide the quality of services. An experimental result shows that this proposed system produces efficient result. To overcome the problems presented in existing system, It introduces the one new algorithm is that node-free routing protocol instead of the round robin algorithm. In this protocol before scheduling process, it analyses the node. If anyone node is free for transmission, It schedules the packet to the nodes.

Keywords: Mobile networks, cellular networks, node free routing algorithms.

1. INTRODUCTION

In information technology, a network is a series of points or nodes interconnected. Networks can interconnect with other networks and contain sub networks.

A data transmission technology in whether it use the network (public or private); by the usual nature of its connections Large telephone networks and networks using their infrastructure (such as the Internet) have sharing and exchange arrangements with other companies so that larger networks are created.

A computer network is a group of computer systems and other computing hardware devices that are linked together through communication channels to facilitate communication. One of the earliest examples of a computer network was a network of communicating computers that functioned.

A sensor network is a group of specialized transducers with a communications infrastructure intended to monitor. The electric utility or from a battery.

2. RELATED WORK

The environment and organizing the collected data. There are many different types of setups that could be called MANETs and the potential for this sort of network is still being studied.

A hybrid network is any computer network that uses more than one type of connecting technology or topology. Hybrid networks use a combination of any two or more topologies in such a way that the resulting network does not exhibit one of the standard topologies.

A communication mode (setting) that allows computers to directly communicate with each other without a router. Many ad hoc networks are local area networks where computers or other devices are enabled to send data directly to one another rather than going through a centralized access point.

The idea of an ad hoc network is often unfamiliar to end users who have only seen small residential or business networks that use a typical router to send wireless signals to individual computers. Both of these are examples of ad hoc networks that use a large collection of individual devices to freely communicate without a kind of top-down or hierarchical communication structure.

3. EXISTING METHOD

In the existing system the QOS was achieved by the selection of round robin algorithm. This round robin algorithm selected the minimum path between the

sources to the destination. In this system the packet resizing was allowed to overcome a packet overflow when we sending the large amount of file. Then the redundant packets are discovered in the process of redundant avoidance. This process avoided all the duplicate packets when the node sends the redundant information to their neighbor node.

The QoS guaranteed neighbor selection algorithm is used to meet the requirements of transmission delay. The existing system resizes the segment .Distributed packet scheduling algorithm is used to reduce the transmission delay in the existing system.

4. PROPOSED METHOD

In our proposed work we use the node-free algorithm for the scheduling process. After finding this information uses the node for the packet transmission. It assign earlier generated packet to forwarder with higher queuing delay and recently generated packet with lower queuing delay. Here node lifetime is calculated before sending the packet. It avoids packet loss when transmitting the packet. Here least stack first algorithm is used. Then our work also reduces the packet transmission time.

5. SYSTEM FLOW DIAGRAM

The first module is that the node formation. Our project is done in the wireless networks. So, we form the 50 nodes. Here the nodes are mainly used for communication purpose. All are the mobile nodes. After node formation the source and destination nodes are chosen for packet transmission. After the node formation then we select the neighbor node for start the communication. Using guaranteed neighbor selection algorithm the source node sends the message to nearest neighbor node. That node sends the replay message to source node which contains the packet capacity, packet arrival interval, and transmission delay and packet deadline of neighbor node.

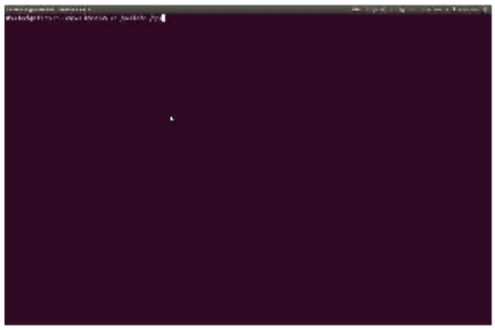
Distributed packet scheduling algorithm is used for reducing packet transmission time. It assign earlier generated packet to forwarder with higher queuing delay and recently generated packet with lower queuing delay. We used round robin algorithm for packet scheduling. Round robin algorithm is one of the efficient scheduling algorithms.

All node lifetime is calculated before sending the packet. It avoids packet loss when transmitting the packet. Here least stack first algorithm is used. Here the intermediate node first allowed transmitting the packet. Mobility based packet resizing algorithm is used. It assigns larger size packet to lower mobility intermediate node and smaller size packet to higher mobility intermediate node. It increase the QOS guaranteed in packet transmission. Here the segment resized according to the node mobility to reduce the transmission time. After the deadline calculation then we avoid redundant data. Here data redundancy elimination-based transmission algorithm is used to avoid redundancy of packet and it increases the transmission throughput. After complete the all steps then we start the packet transmission without any problems. The final stage of our proposed system is that the packet transmission. We transmit the packet between the source and destination node in order to achieve the proper communication.

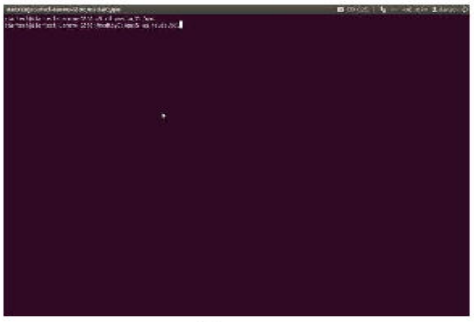
Figure1: System flow diagram

6. EXPERIMENTAL RESULTS

This system first find out the location network communication for sending the packet transmission and open the correct terminal next change the location of the network. Then select and enter the correct file name. This method is selected the communication from the network for proper packet transmission without any problem and it form the node formation. Then the nodes are selected the source node and destination node for the sending the packet transmission through the round robin algorithm in this method using without any failure of the packet transmission in the network communication.



(a)



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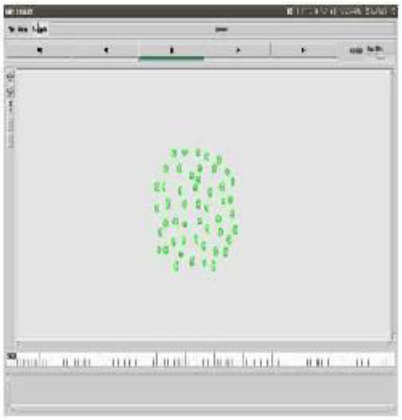
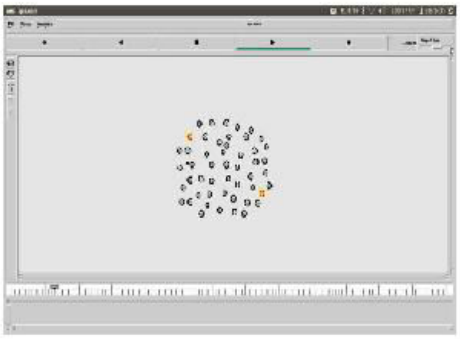
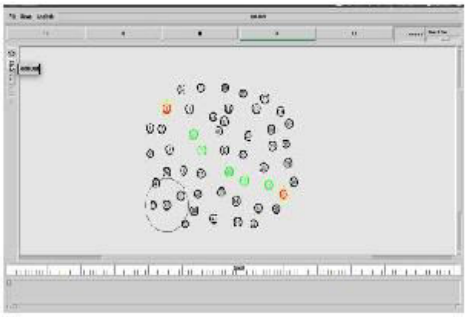
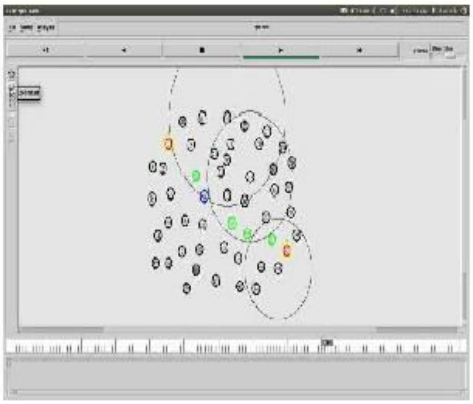


(c)

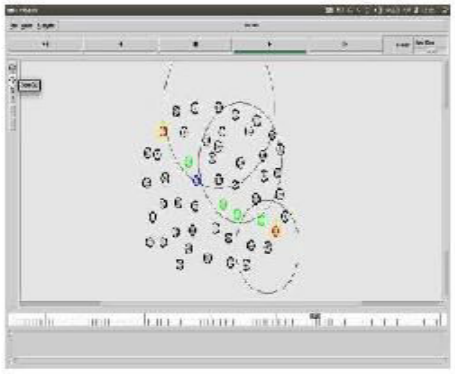




(d)



(e)



(f)

Figure:2 Results of the proposed method(a) The image of open the terminal; (b) Selecting the location;(c) Node formation;(d)Finding the source and destination and finding the path selection;(e) Sending the packet transmission;(f) The packet transmission is completed.

7. CONCLUSION AND FUTURE WORK

7.1Conclusion

This system to transmit the packet from source to destination with the help of hybrid network. To use Quos algorithm to transforming the data between the nodes. A selfish node isolation method for solving Energy degradation problem .Selfish node isolation method is the method in which the energy less nodes are isolated from the network and find an alternate route for packet transmission. In an ad hoc network, the transmission range of nodes is limited; hence nodes mutually cooperate with its neighboring nodes in order to extend the overall communication. However, along with the cooperative nodes, there may be some reluctant nodes like selfish nodes and malicious nodes present in the network. Hence it could improve the quality of service of hybrid network in terms of Packet delivery ratio and Delay. These types of transmission accurately deliver the packet to the destination.

7.2 Future Work

In proposed concept just modify the scheduling algorithm in order to offer the efficient result. System future work has to improve the scalability and efficiency and apply this concept into the security related areas. One of the possibilities of the attack is that the DOS attack. It perform scheduling process but if more than one user requests the same resources means the attack will happen. So, avoid these kinds of attack in future.

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